

## B24C

### ABRASIVE OR RELATED BLASTING WITH PARTICULATE MATERIAL

#### Definition statement

*This subclass/group covers:*

Abrasive or related blasting with particulate material, whereby a blast of any particles or pellets dispersed in air, gas, or liquid ( or an equivalent jet of particles or pellets projected or energised by other means ) is used for the treatment of surfaces or cutting of materials, the particles usually being of abrasive material.

Blasting with jets acting as abrasive jets, but not containing particulate material in the case of deburring, removal of extended surface areas and jet milling of local recessions like e.g. grooves.

#### Relationship between large subject matter areas

##### - Abrasive machining

Subclass [B24B](#) of grinding and polishing complements the abrasive blasting with particulate material, which is covered by [B24C](#). Polishing or abrading surfaces by means of tumbling apparatuses or other apparatuses in which the work or the abrasive material is loose, are covered by main group [B24B 31/00](#). Abrading internal surfaces, e.g. of a tube or a flow channel, by operations in which a plastically deformable grinding compound is used as a loose abrasive material under the influence of pressure, known in the art as abrasive flow machining, extrude honing or hydro-erosive machining, is covered by group [B24B 31/116](#) when the dynamic viscosity of the carrier medium is higher than that of conventional fluids such as diesel. When the dynamic viscosity of the carrier is less than or equal to that of conventional fluid (e.g. when water is used as a carrier), the machining is considered as particulate blasting of an internal surface, which is covered by [B24C 3/325](#) and its subgroups.

##### - Spraying or atomising, nozzles

Spraying or atomising in general and nozzles in general are covered by subclass [B05B](#).

Nozzles specially adapted for blasting surfaces with a jet of particulate material are covered by group [B24C 5/04](#).

##### - Abrasive materials and polishing compositions

Abrasive particles, powders or compositions in general are covered by groups [C09K 3/14](#) and [C09G 1/00](#). Polishing compositions in general when they contain abrasives or grinding agents are covered by [C09G 1/02](#). When used as materials for abrasive blasting, they are covered by [B24C 11/00](#).

## References relevant to classification in this subclass

*This subclass/group does not cover:*

Energy dissipating devices for cutting jets with or without particles, known in the art as catcher tanks	<a href="#">B26F 3/008</a>
Blasting semiconductor devices e.g. with a jet of particulate matter acting like sand blasting	<a href="#">H01L 21/3046</a>
Dental tools or instruments acting like a sandblast machine	<a href="#">A61C 3/025</a>
Producing decorative effects by removing surface-material using streams of abrasive particles	<a href="#">B44C 1/221</a>

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Attention is drawn to the following places, which may be of interest for search and classification:

Perforating by means of a fluid jet without particles	<a href="#">B26F 1/26</a>
Severing by means of a fluid jet without particles	<a href="#">B26F 3/004</a>
Cleaning in general; prevention of fouling in general	<a href="#">B08B</a>
Cleaning by the force of jets or sprays without particles	<a href="#">B08B 3/02</a>
Sonic or ultrasonic cleaning	<a href="#">B08B 3/12</a>
Processes employing sonic or ultrasonic vibrations	<a href="#">B01J 19/10</a>
Application of shock-waves	<a href="#">B01J 3/08</a>
Cavitation peening. Treating or	<a href="#">B23P 9/04</a>

finishing by hammering or applying repeated pressure	
Shot-peening for deforming sheet metal, tubes or profiles	<a href="#">B21D 31/06</a>
Shot-peening as a metallurgical treatment of iron or steel	<a href="#">C21D 7/06</a>
Shot-peening as a metallurgical treatment of non-ferrous material	<a href="#">C22F 1/00</a>
Peening when the peening media is guided on its path during the peening action	<a href="#">B24B 39/006</a>
Nozzles in general, Spraying or atomising in general	<a href="#">B05B</a>
Jet flame processing in general	<a href="#">B05B 7/205</a>
Production of stencils for photo mask processing	<a href="#">G03F 7/12</a>
Stripping of photosensitive material	<a href="#">G03F 7/42</a>
Implements or apparatus for removing dry paint from surfaces, e.g. by scraping	<a href="#">B44D 3/16</a>
Machines or devices for scraping	<a href="#">B23D 79/02</a>
Earth drilling by liquid or gas jets, with or without entrained pellets	<a href="#">E21B 7/18</a>
Recycling of tires	<a href="#">B29B 17/02</a>
Controlling; regulating, e.g. cutting control, pierce-through measurement	<a href="#">G05</a> , <a href="#">G05B</a>

## **B24C 1/00**

**Methods for use of abrasive blasting for producing particular effects; Use of auxiliary equipment in connection with such**

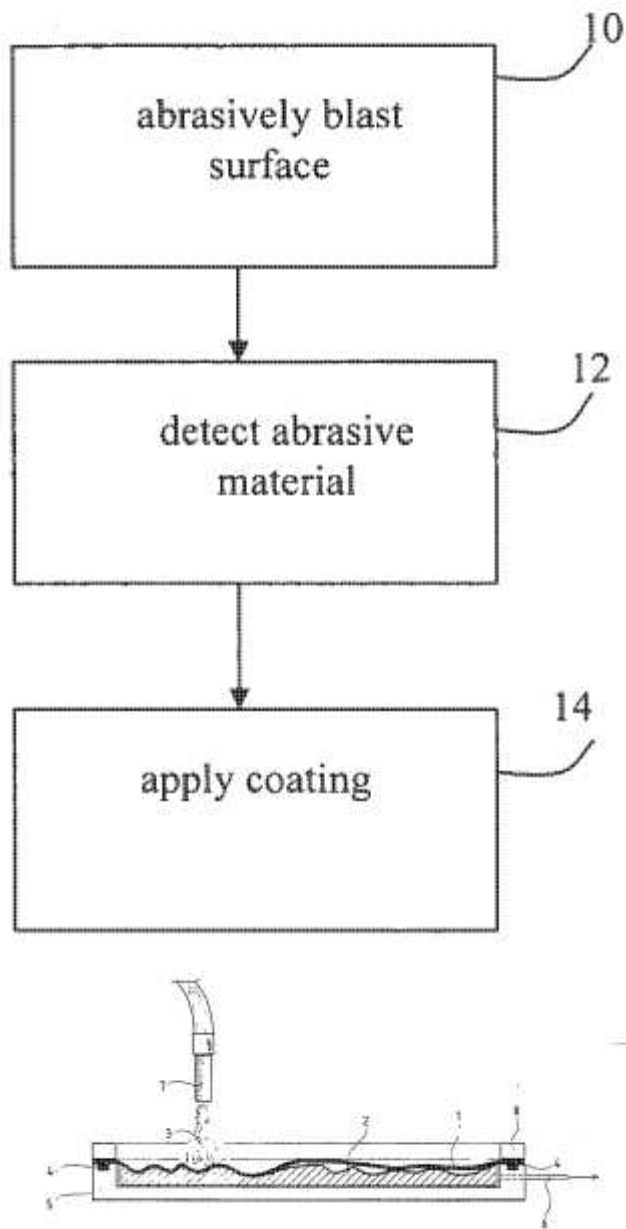
## methods

### Definition statement

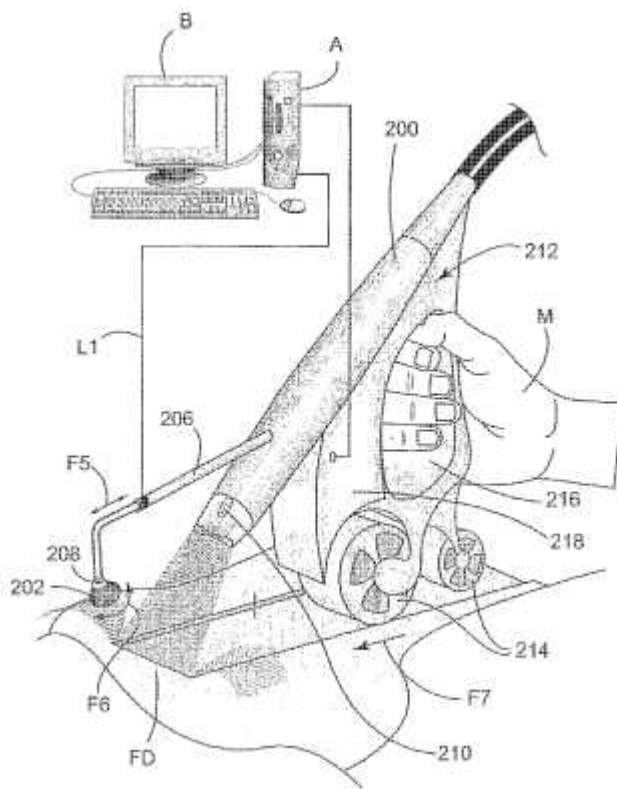
*This subclass/group covers:*

Abrasive blasting methods for producing particular effects and also devices configured to perform these methods.

Example(s): US20080076328, EP0015470, WO20060097133.







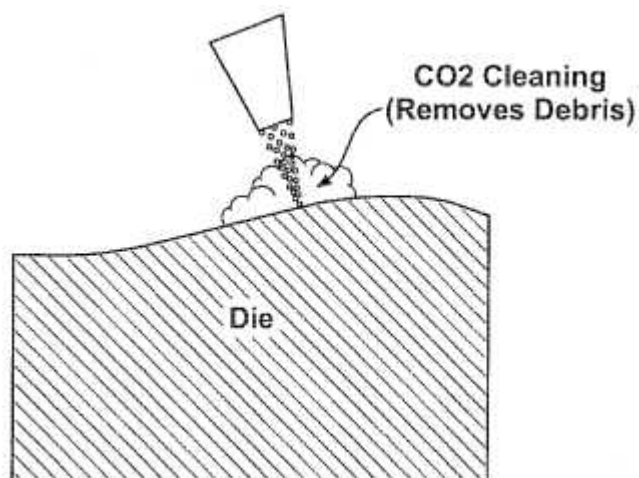
## B24C 1/003

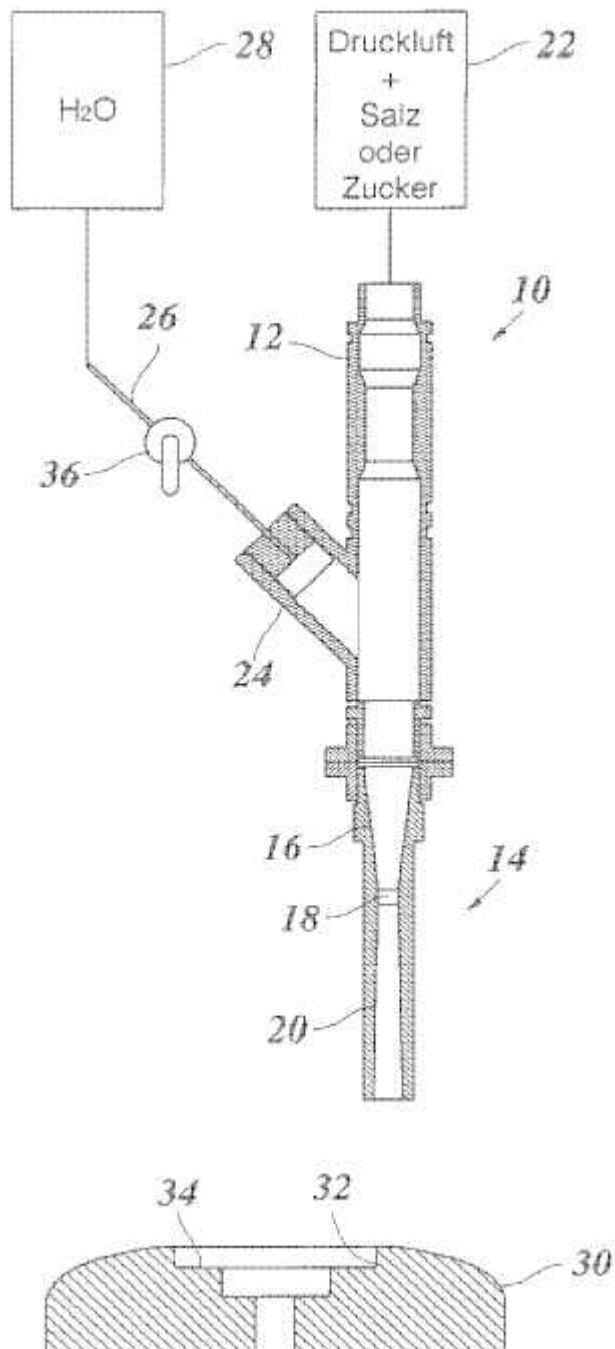
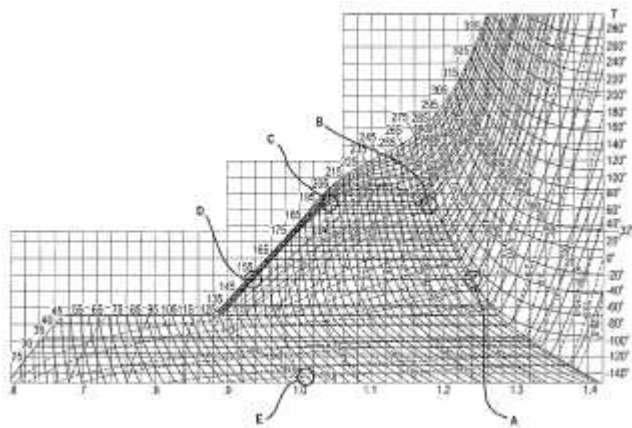
[N: using material which dissolves or changes phase after the treatment e.g. ice, CO<sub>2</sub>]

### Definition statement

*This subclass/group covers:*

Example(s): US20100192655, US20060089090, DE1020040023246.





## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Attention is drawn to the following places, which may be of interest for search and classification:

Production, working, storing or distributing of ice	<a href="#">F25C 1/00</a>
Solidifying carbon dioxide	<a href="#">C01B 31/22</a>

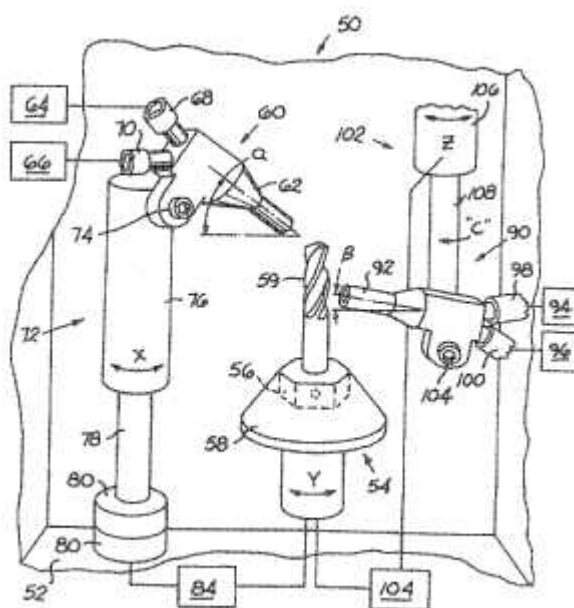
## B24C 1/02

**for sharpening or cleaning cutting tools, e.g. files**

## Definition statement

*This subclass/group covers:*

Example(s): WO9735686, EP1792691.



## **B24C 1/04**

**for treating only selected parts of a surface, e.g. for carving stone or glass**

### **Definition statement**

*This subclass/group covers:*

Example(s): US 20100269593, US20070259606.

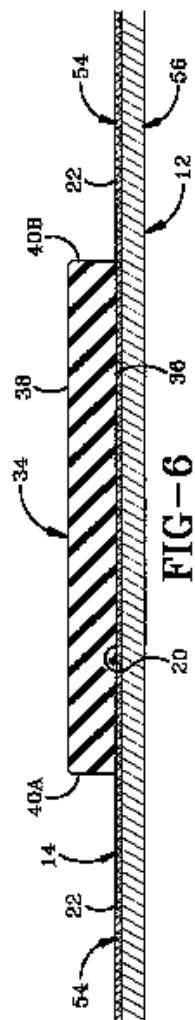


FIG-6

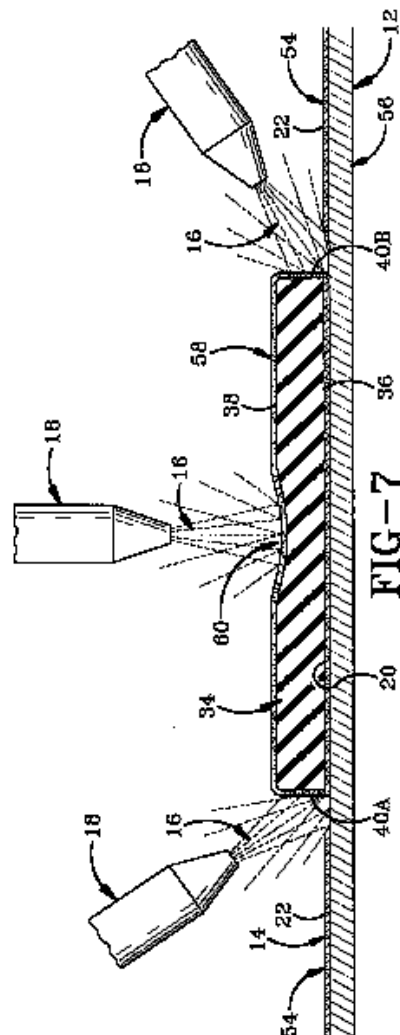


FIG-7

## B24C 1/045

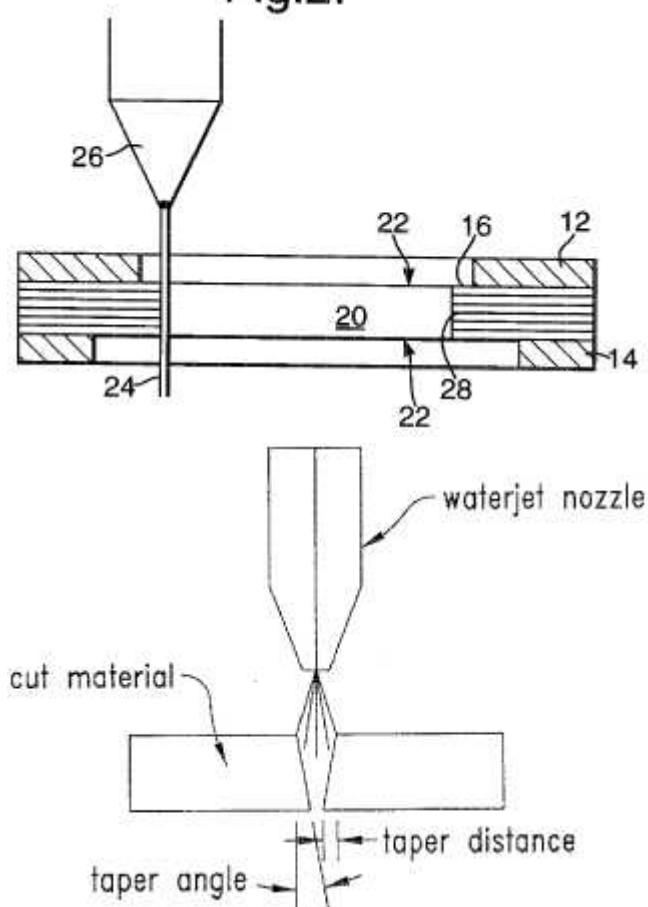
for cutting (energy dissipating devices therefor B26F3/008)

### Definition statement

*This subclass/group covers:*

Example(s): GB2400893, US20030065424.

Fig.2.



## References relevant to classification in this group

*This subclass/group does not cover:*

Energy dissipating devices for cutting jets with or without particles, known in the art as catcher tanks	<a href="#">B26F 3/008</a>
--	----------------------------

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Attention is drawn to the following places, which may be of interest for search and classification:

Controlling; regulating, e.g. cutting control, pierce-through measurement	<a href="#">G05</a> , <a href="#">G05B</a>
---	--

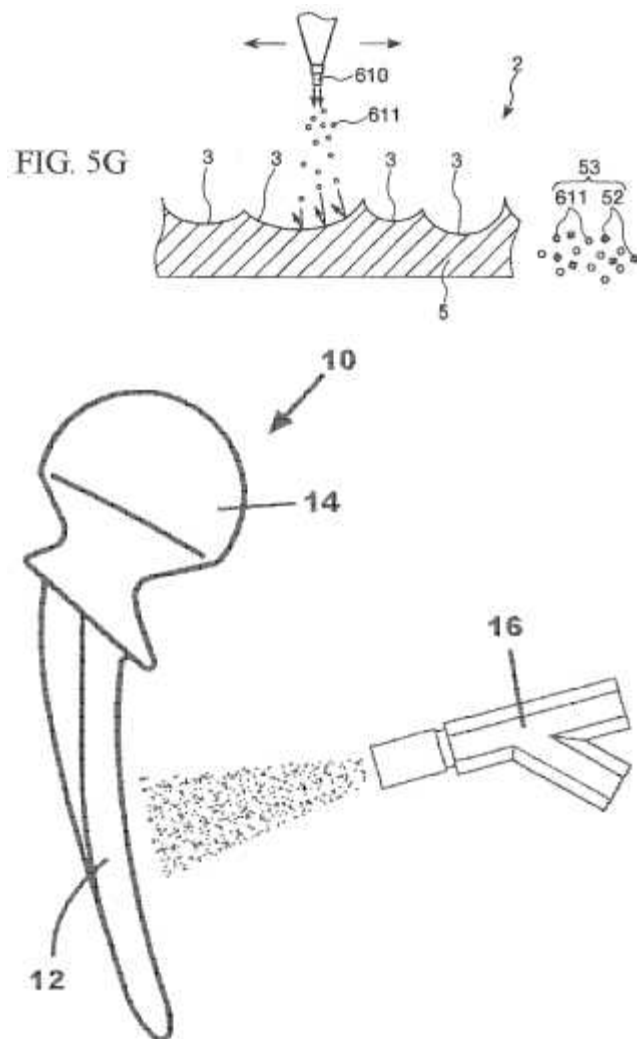
## B24C 1/06

for producing matt surfaces, e.g. on plastic materials, on glass

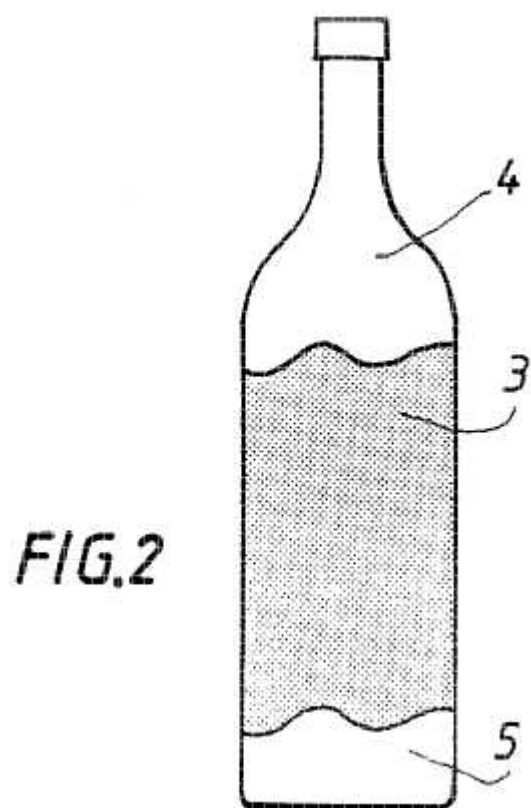
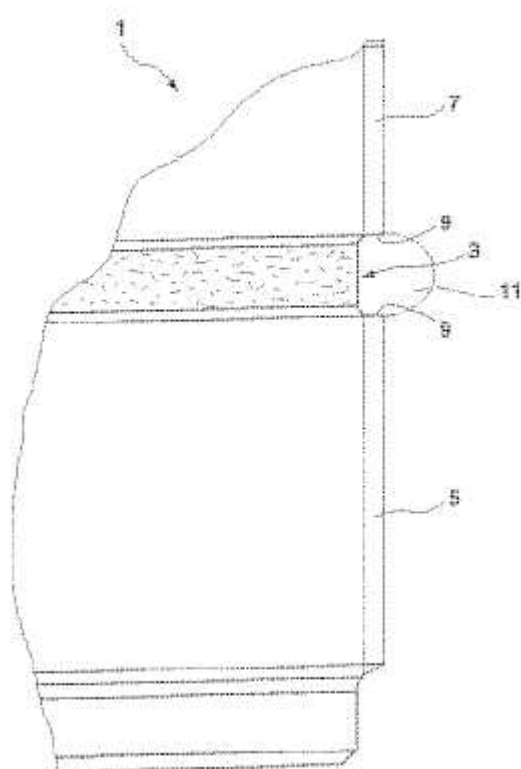
### Definition statement

*This subclass/group covers:*

Example(s): EP1803532, US7131303, JP20040230549, EP0811582.







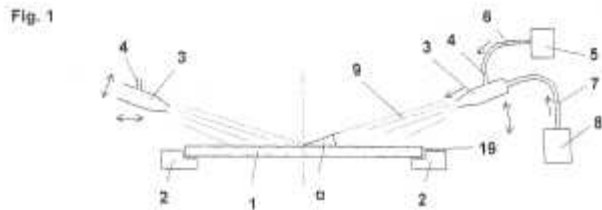
## B24C 1/08

for polishing surfaces, e.g. [N: smoothing a surface] by making use of liquid-borne abrasives

### Definition statement

*This subclass/group covers:*

Example(s): EP2132001.



## B24C 1/083

[N: Deburring]

### Definition statement

*This subclass/group covers:*

Example(s): US20040168494, EP1839801, WO20080044613.

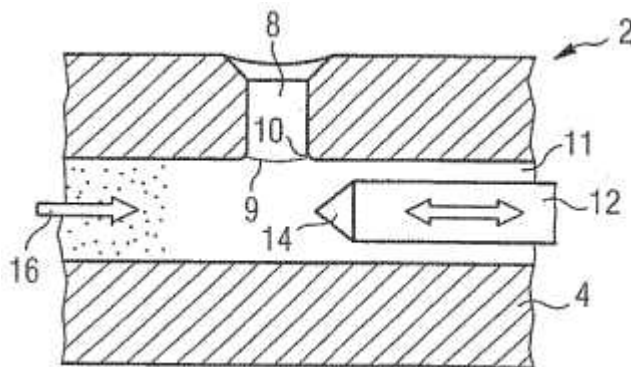
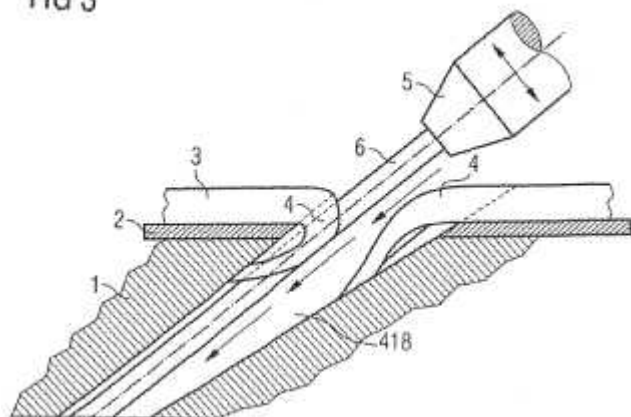
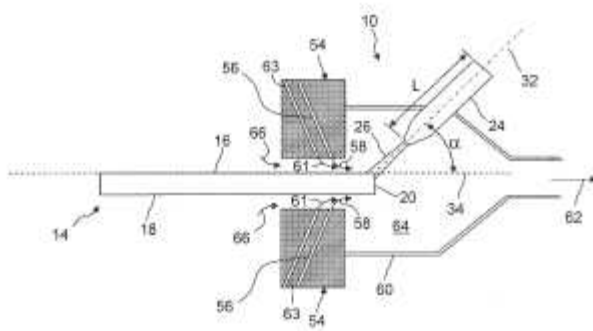


FIG 3





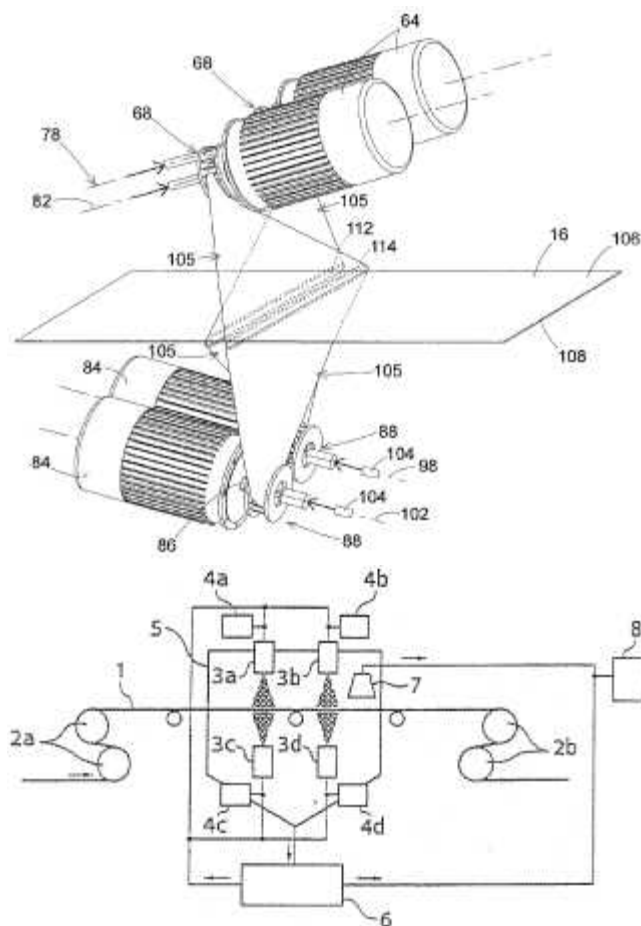
## B24C 1/086

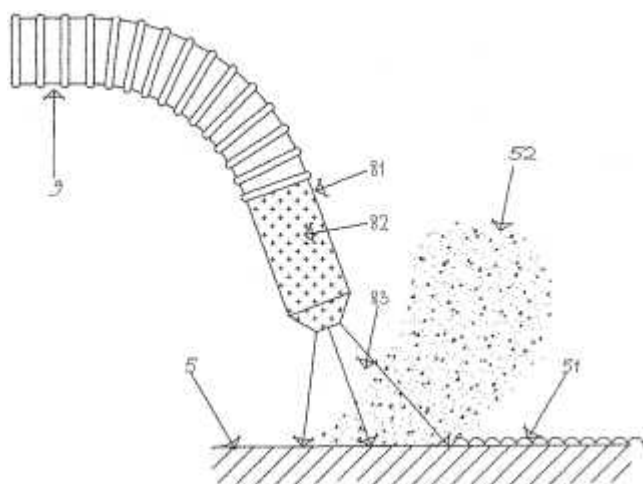
[N: Descaling; Removing coating films]

### Definition statement

*This subclass/group covers:*

Example(s): US20080108281, US20030219621, US20030116649.





## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Attention is drawn to the following places, which may be of interest for search and classification:

Cleaning by the force of jets or sprays without particles	<a href="#">B08B 3/02</a>
---	---------------------------

## B24C 1/10

for compacting surfaces, e.g. shot-peening (for deforming sheet metal, tubes or profiles B21D31/06; as a metallurgical treatment C21D7/00, C22F1/00)

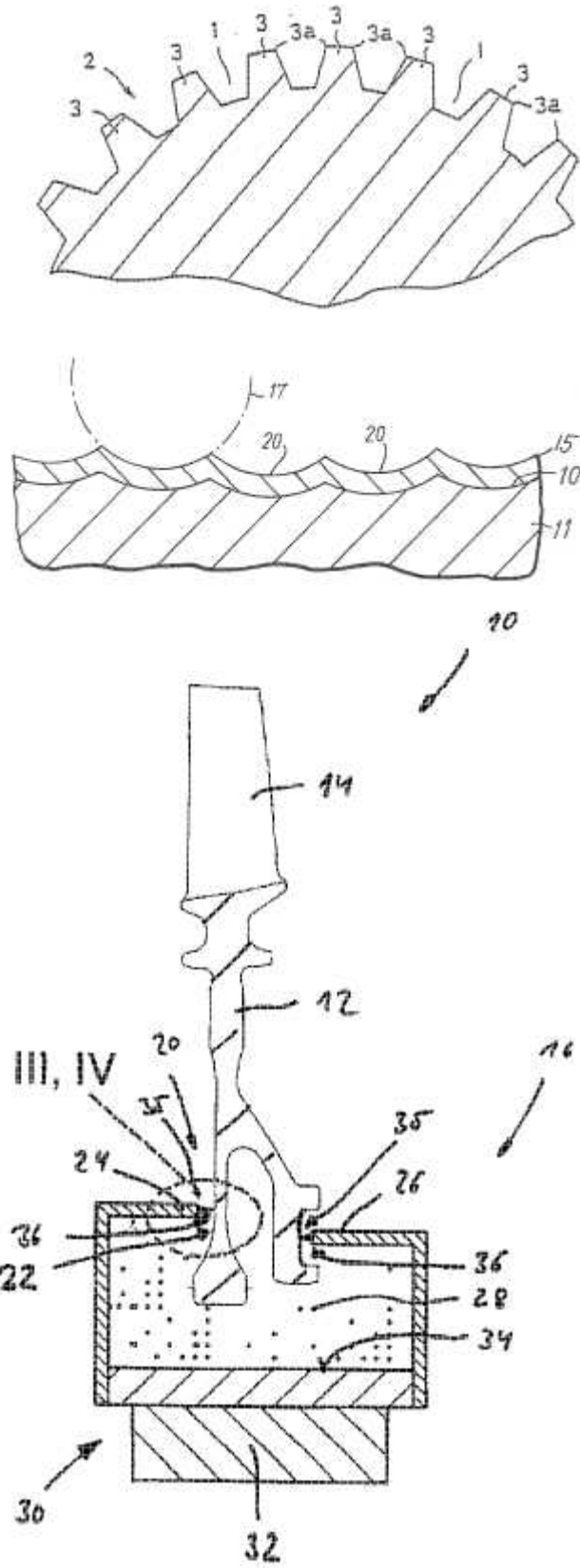
## Definition statement

*This subclass/group covers:*

Example(s): FR2689431, EP0359277, US4258084, DE1020080011243.



FIG. 2



## References relevant to classification in this group

*This subclass/group does not cover:*

Peening when the peening media is guided on its path during the peening action	<a href="#">B24B 39/006</a>
--	-----------------------------

Examples of places where the subject matter of this group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Shot-peening for deforming sheet metal, tubes or profiles	<a href="#">B21D 31/06</a>
Shot-peening as a metallurgical treatment of iron or steel	<a href="#">C21D 7/06</a>
Shot-peening as a metallurgical treatment of non-ferrous material	<a href="#">C22F 1/00</a>

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Attention is drawn to the following places, which may be of interest for search and classification:

Application of shock-waves	<a href="#">B01J 3/08</a>
Cavitation peening. Treating or finishing by hammering or applying repeated pressure	<a href="#">B23P 9/04</a>

## B24C 3/00

### Abrasive blasting machines or devices; Plants

#### Definition statement

*This subclass/group covers:*

Abrasive blasting machines and plants.

## References relevant to classification in this group

*This subclass/group does not cover:*

Aspects of machines related to the processes of group <a href="#">B24C 1/00</a> and its subgroups	<a href="#">B24C 1/00</a>
Aspects of machines related to the processes of dry ice blasting and blasting with salt dissolving during or after blasting	<a href="#">B24C 1/003</a>
Aspects of machines related to the process of shot peening	<a href="#">B24C 1/10</a>

## B24C 3/02

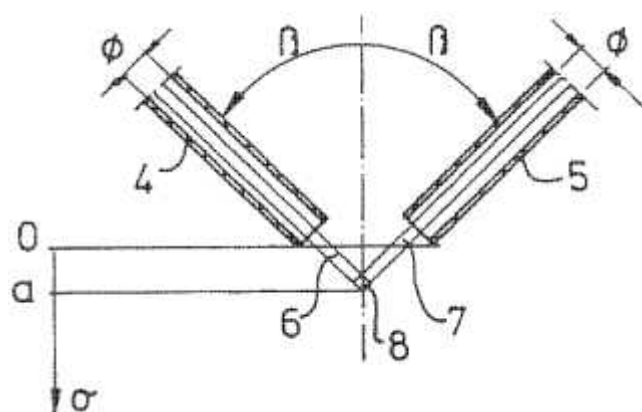
**characterised by the arrangement of the component assemblies with respect to each other (B24C3/08, B24C3/18 take precedence)**

### Definition statement

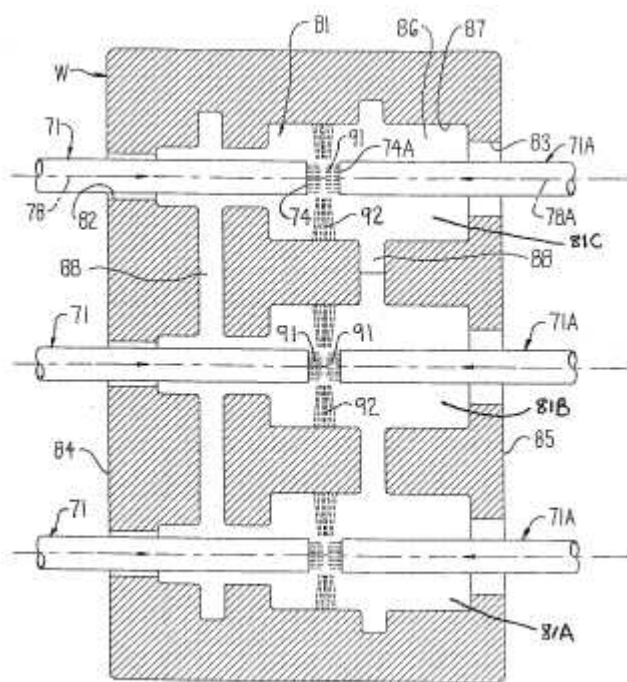
*This subclass/group covers:*

Also machines with intersecting and swinging or swivelling nozzles.

Example(s): US6604986 (intersecting nozzles), US20040162009, DE1020070006673 (swinging nozzles).







**B24C 3/04**

**stationary**

**Definition statement**

*This subclass/group covers:*  
also devices with rotating nozzles.

Example(s): DE1020070033788 (robot), WO20100119201 (rotating nozzles),  
WO9114539, US20060049285 (rotating nozzles), US20060135041 (gantry  
type), DE1020080027217

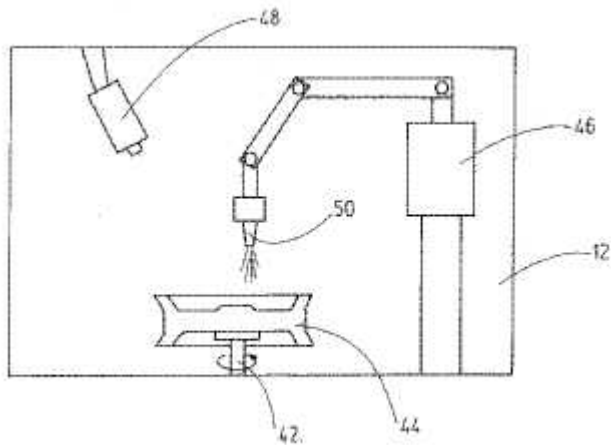
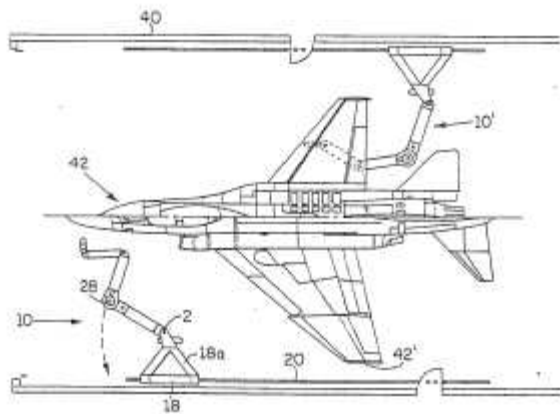
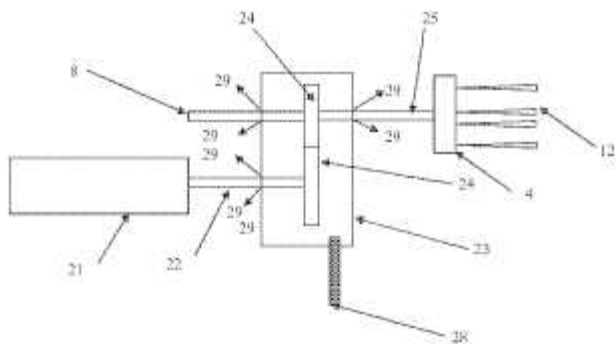
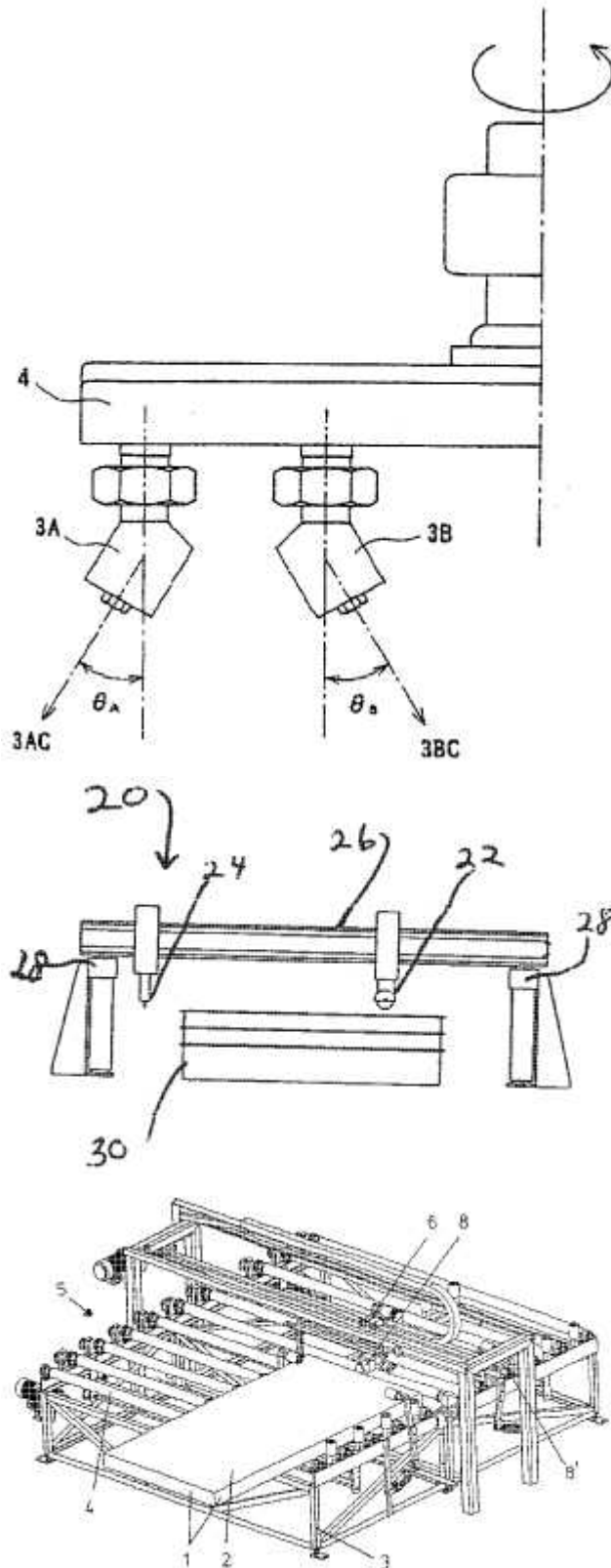


Figure 4





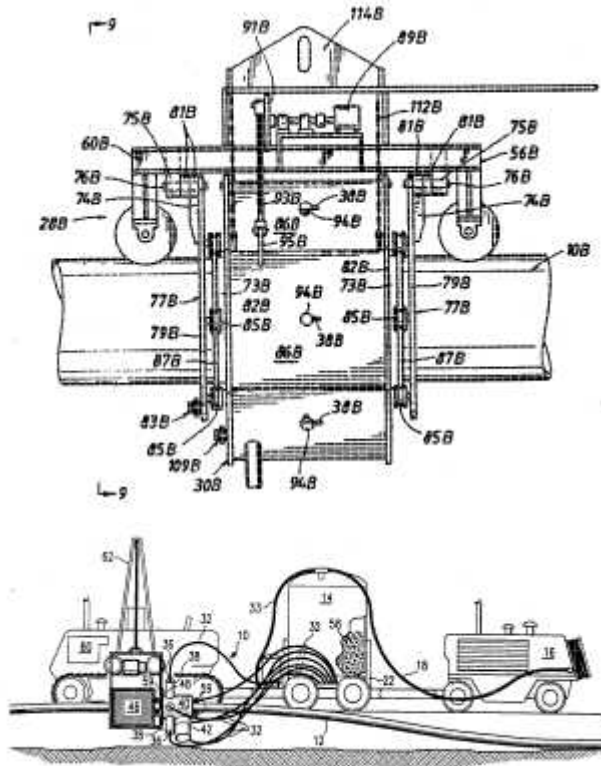
**B24C 3/06**

movable; portable

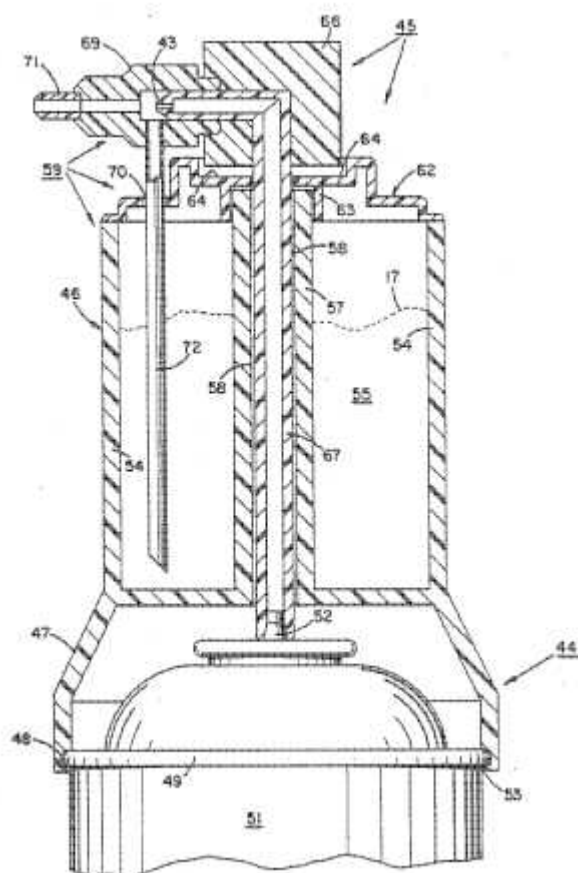
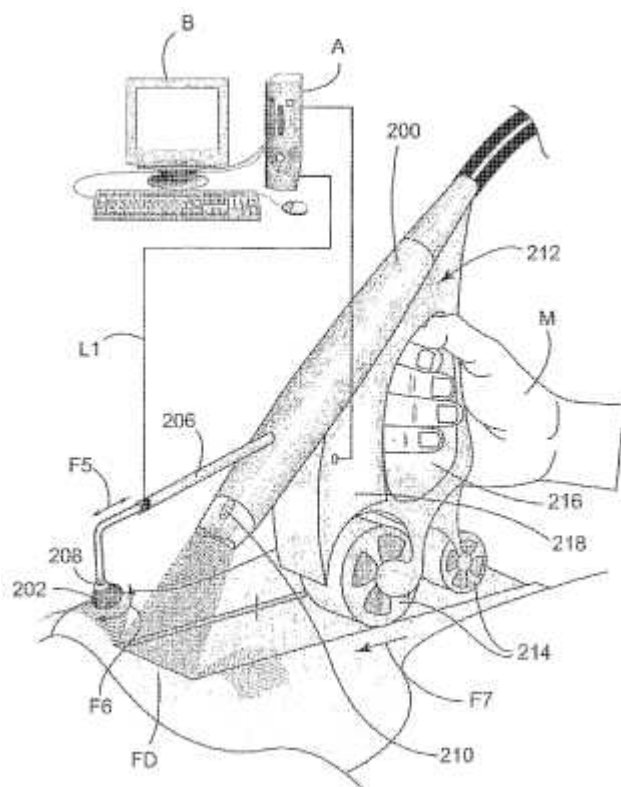
## Definition statement

*This subclass/group covers:*

Example(s): US5191740, US5216849, WO9505922 (road barrier), US20080287039, WO20060097133 (handheld), US5181349 (handheld), EP1207235 (road vehicle), WO0048901, EP0795380 (corner), EP2038088 (portable), US5248436 (from helicopter or ship).







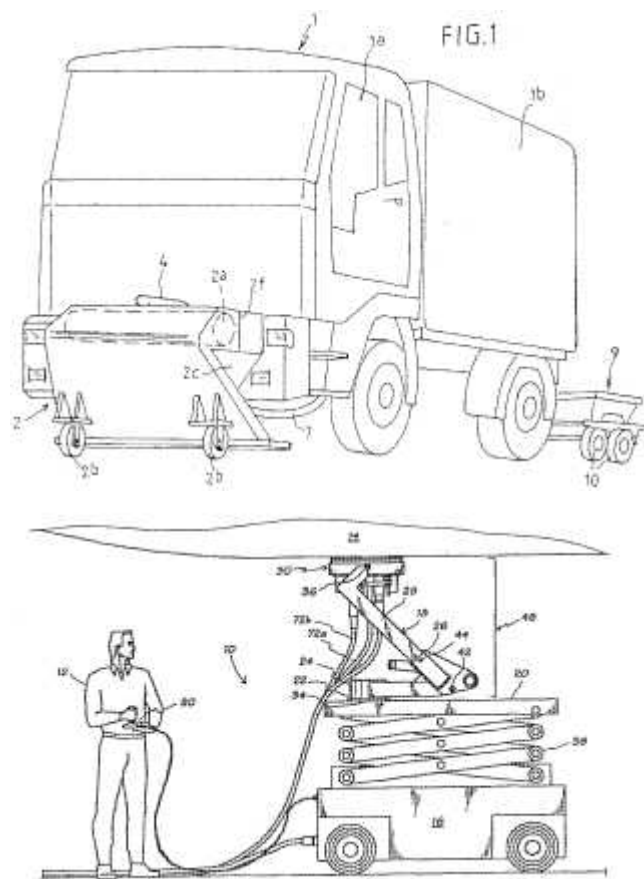
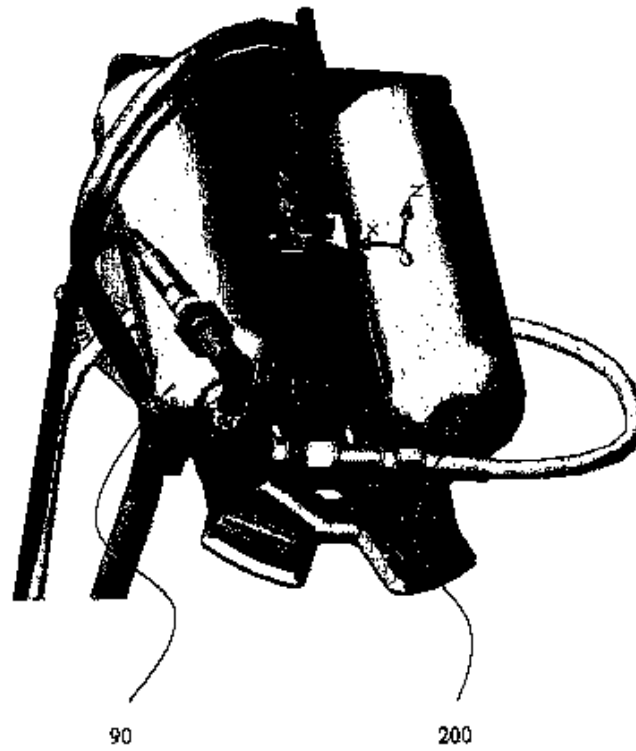






Figure 13



**B24C 3/062**

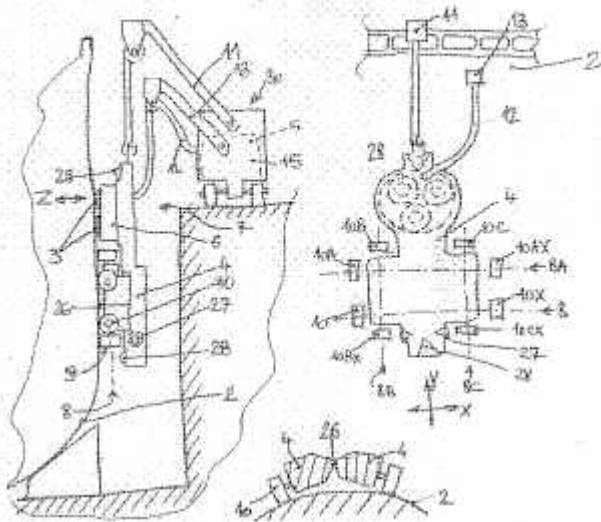
**[N: for vertical surfaces]**

## Definition statement

*This subclass/group covers:*

also blasting of surfaces that are not strictly vertical.

Example(s): FR2891175 (ship hull, airplane hull).



## Special rules of classification within this group

Blasting of surfaces that are not strictly vertical and containing devices with suction means are additionally classified in [B24C 3/065](#).

## B24C 3/067

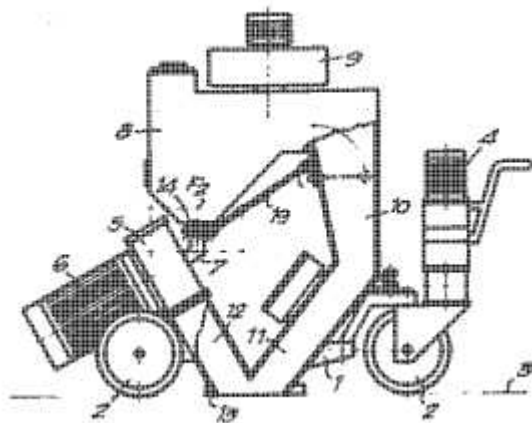
### [N: Self-contained units for floorings]

## Definition statement

*This subclass/group covers:*

Devices with suction means and horizontal working plane for treating floorings.

Example(s): FR2564769.



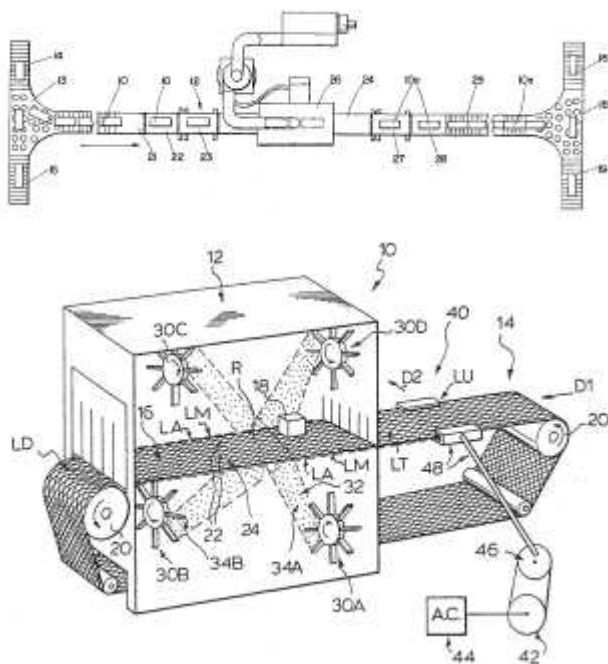
## B24C 3/08

essentially adapted for abrasive blasting of travelling stock or travelling workpieces

### Definition statement

*This subclass/group covers:*

Example(s): US5512005, US5417608



### References relevant to classification in this group

*This subclass/group does not cover:*

Machines or devices where the workpieces are transported or	<a href="#">B24C 3/266</a>
---	----------------------------

agitated by troughed belt conveyors	
-------------------------------------	--

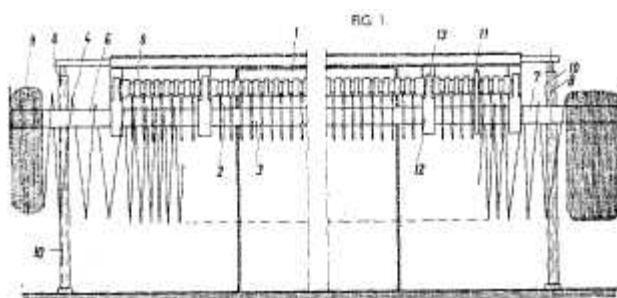
## B24C 3/081

[N: for travelling bundles of wires]

### Definition statement

*This subclass/group covers:*

Example(s): GB1149317.



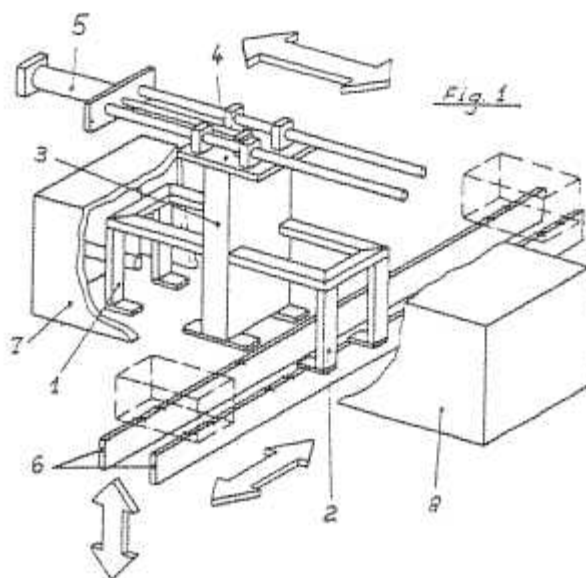
## B24C 3/083

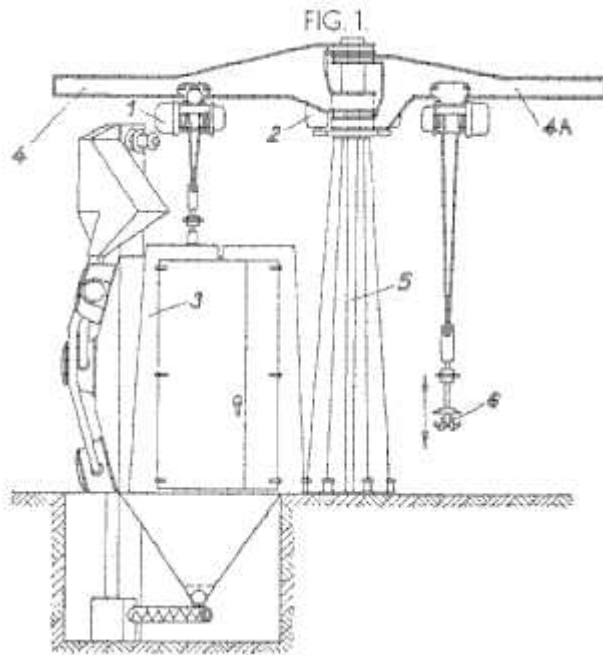
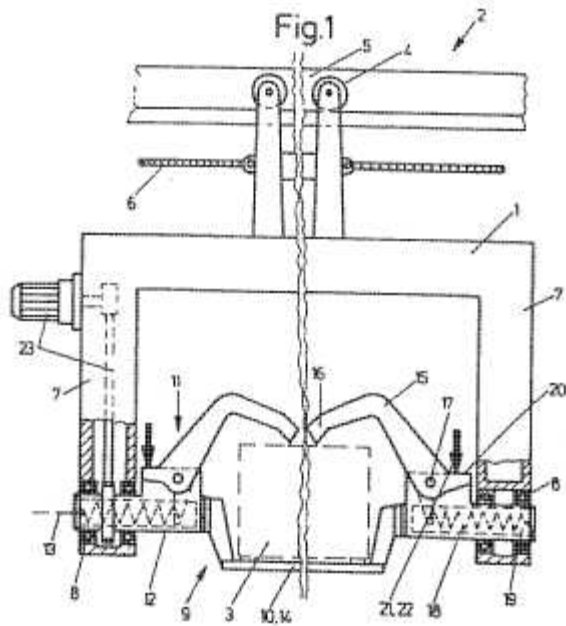
[N: Transfer or feeding devices; Accessories therefor]

### Definition statement

*This subclass/group covers:*

Example(s): EP0227275, EP0100944, GB1080030.





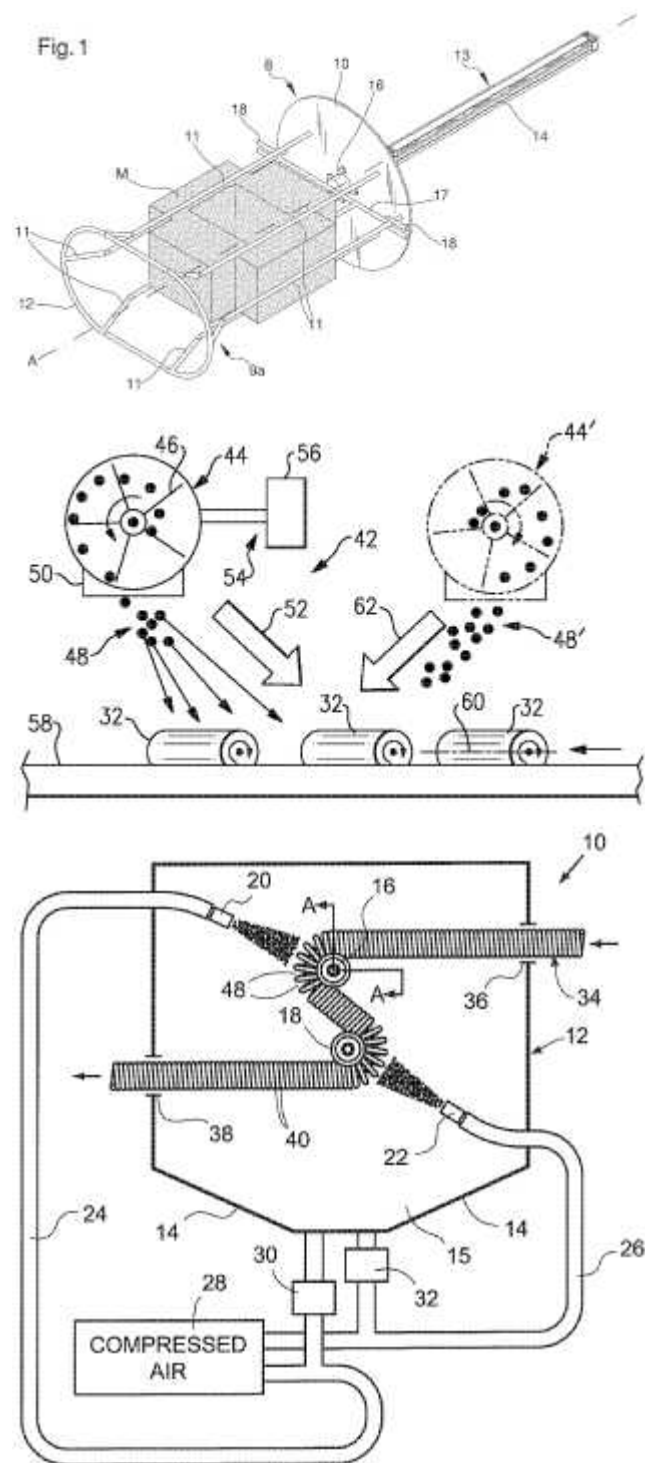
## B24C 3/085

[N: the travelling workpieces being moved into different working positions during travelling]

### Definition statement

*This subclass/group covers:*

Example(s): EP2178677, US20080258367, US20080209731.



## References relevant to classification in this group

*This subclass/group does not cover:*

Machines or devices where the workpieces are transported or agitated by troughed belt conveyors

[B24C 3/266](#)



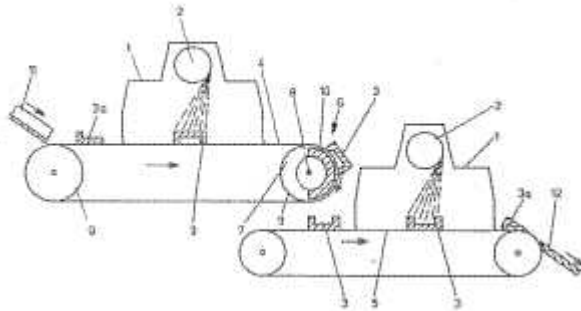
## B24C 3/086

[N: whereby the workpieces are turned through a rotational arc of about 180 degrees]

### Definition statement

*This subclass/group covers:*

Example(s): CH614656.



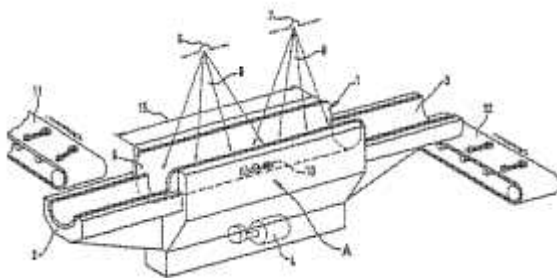
## B24C 3/088

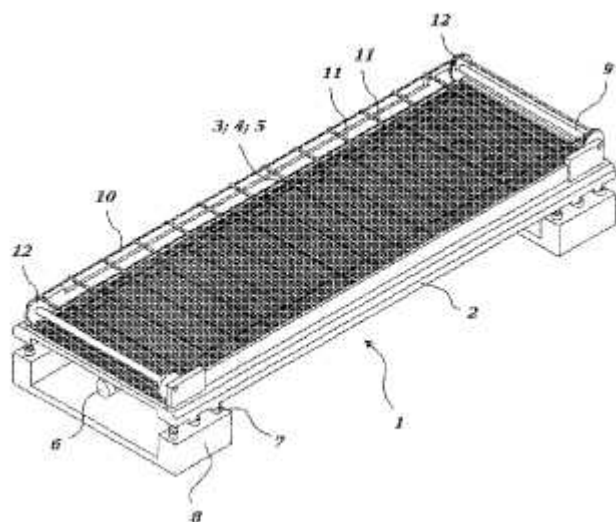
[N: using a vibratory transfer mechanism]

### Definition statement

*This subclass/group covers:*

Example(s): DE4435333, DE1020080011663, US20030186626.





**B24C 3/10**

**for treating external surfaces**

## Definition statement

*This subclass/group covers:*

Example(s): US20050204528

## References relevant to classification in this group

*This subclass/group does not cover:*

Machines or devices where the workpieces are transported or agitated by troughed belt conveyors	<a href="#">B24C 3/266</a>
---	----------------------------

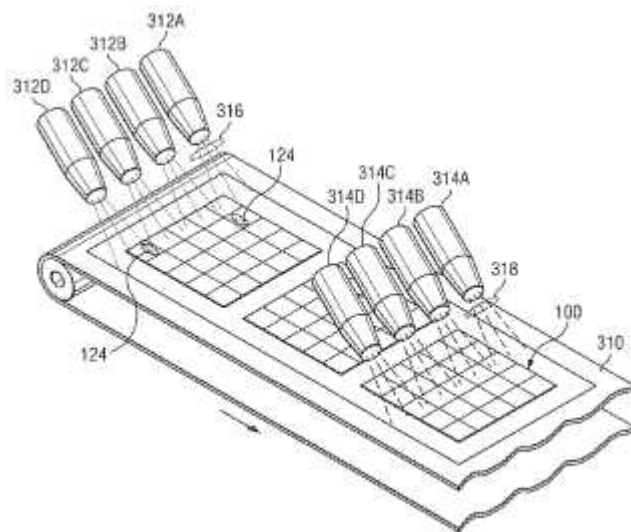
## B24C 3/12

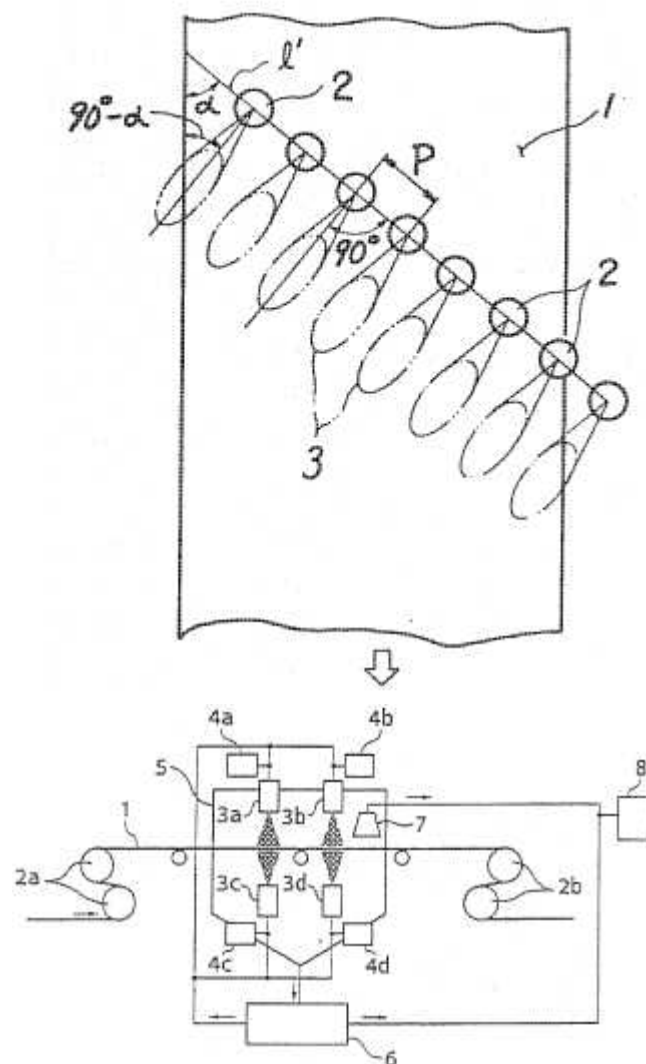
### Apparatus using nozzles

## Definition statement

*This subclass/group covers:*

Example(s): US20050255795, US4251956, US20030219621.





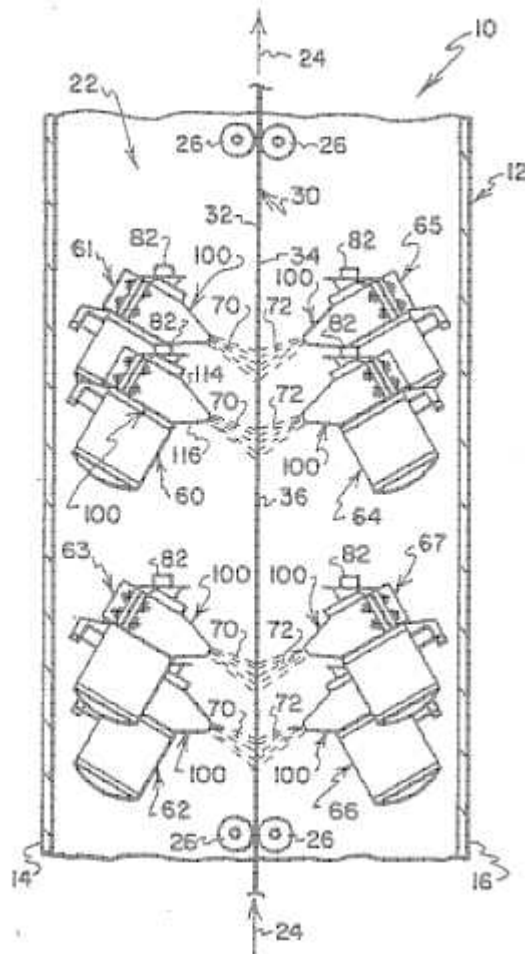
## B24C 3/14

### Apparatus using impellers

#### Definition statement

*This subclass/group covers:*

Example(s): US4566230



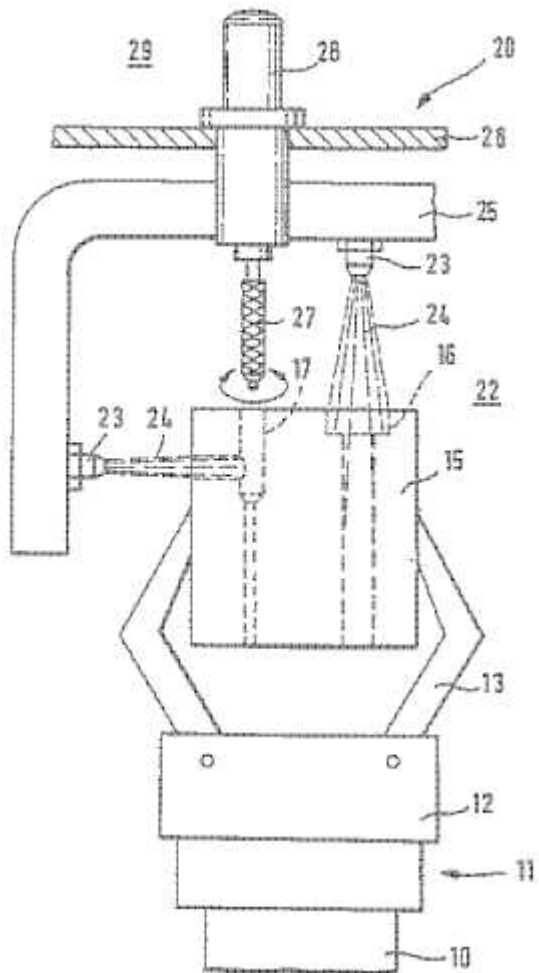
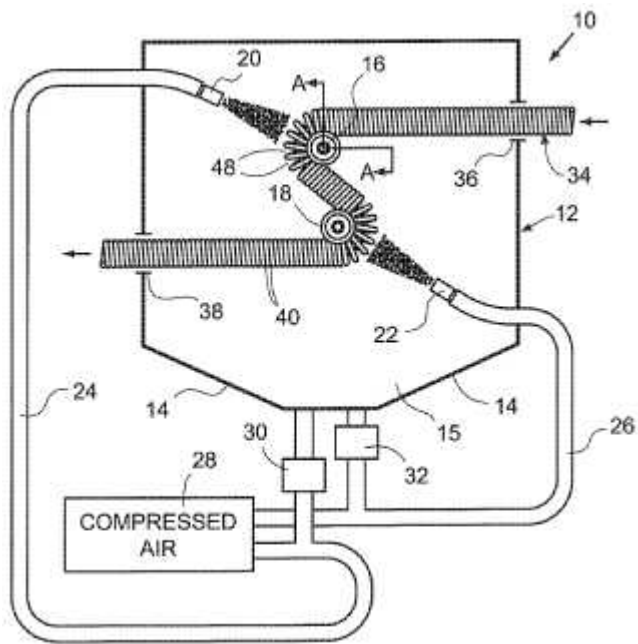
## B24C 3/16

for treating internal surfaces

### Definition statement

*This subclass/group covers:*

Example(s): US20080209731, DE4342593.



**B24C 3/18**

essentially provided with means for moving workpieces into different working positions (B24C3/08 takes precedence)

### Definition statement

*This subclass/group covers:*

Example(s): EP1045743, EP0523462, EP0248096.

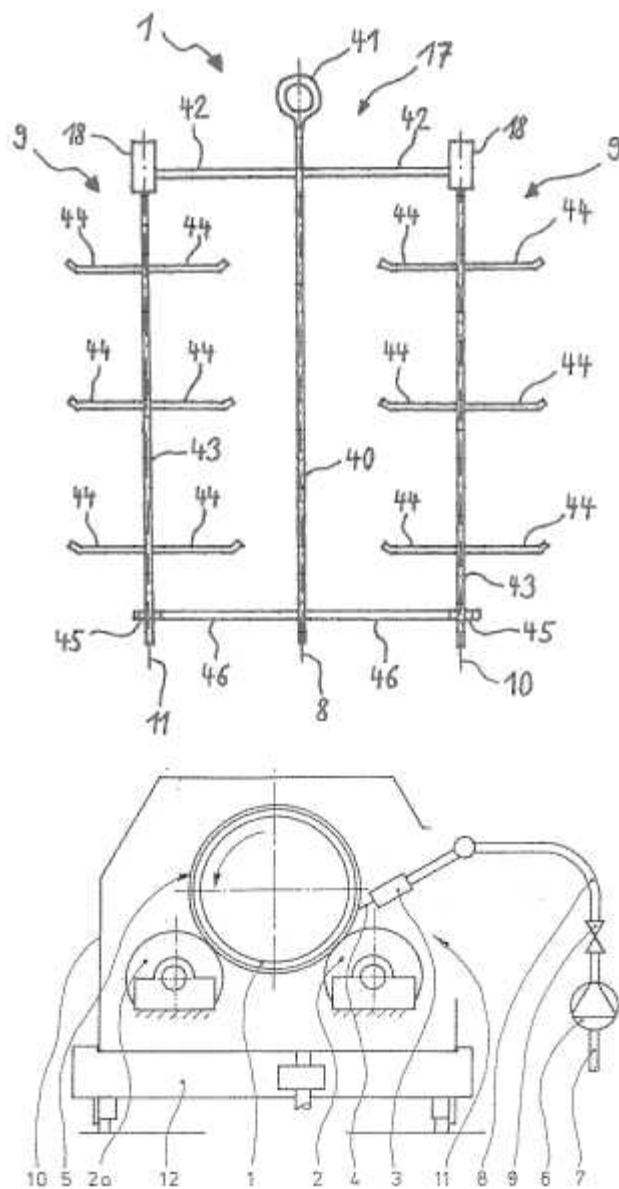
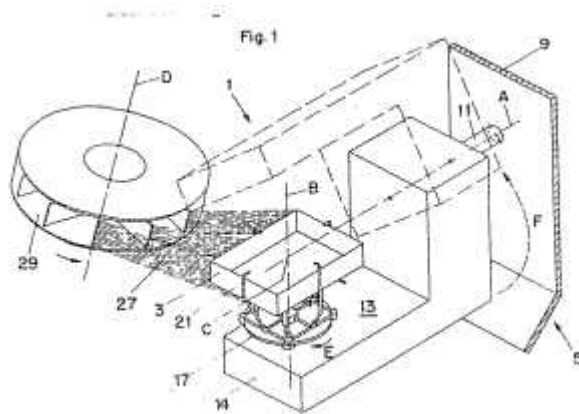


Fig. 1





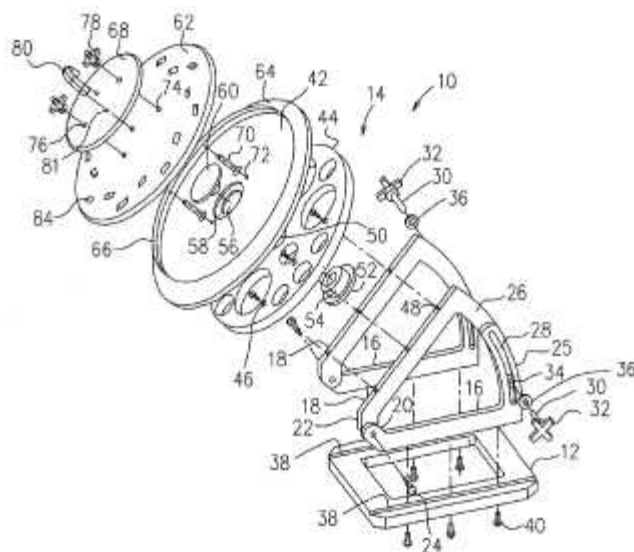
**B24C 3/20**

**the work being supported by turn-tables**

### Definition statement

*This subclass/group covers:*

Example(s): US20060189265.



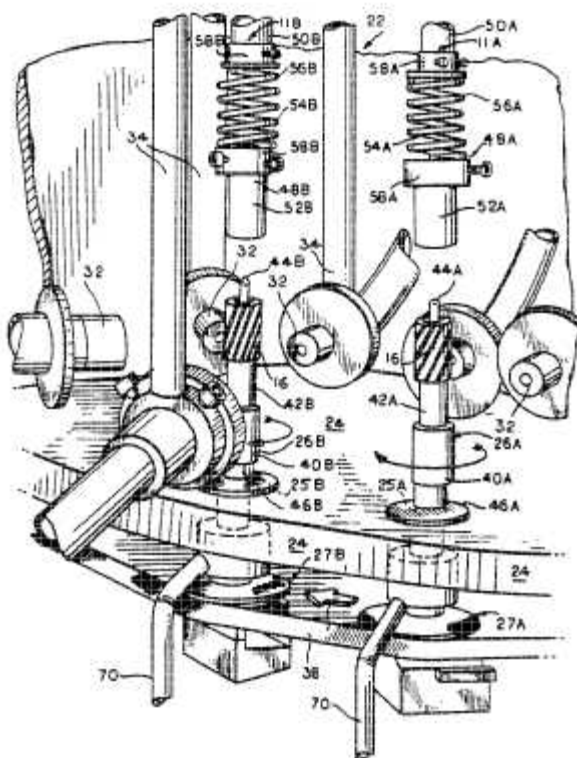
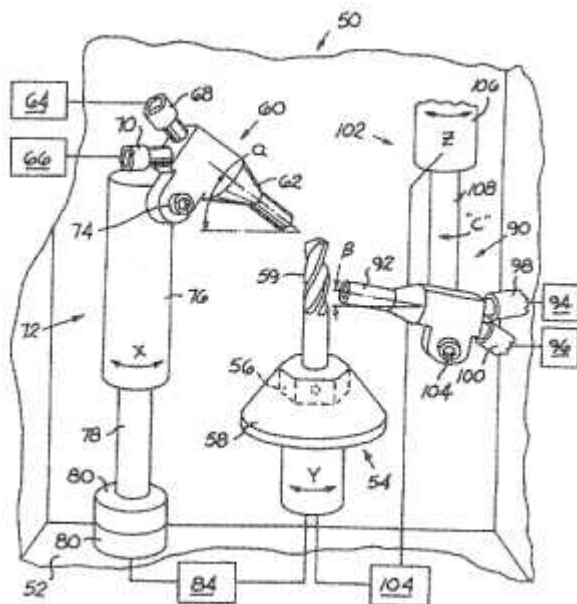
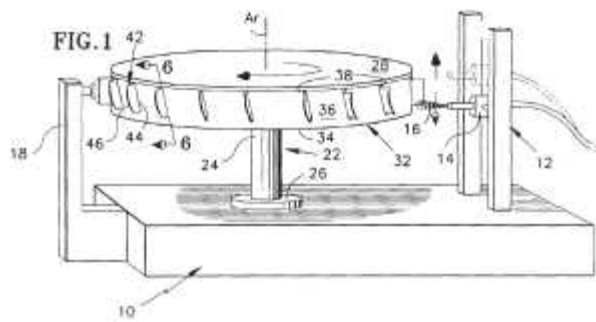
**B24C 3/22**

### Apparatus using nozzles

### Definition statement

*This subclass/group covers:*

Example(s): EP0927773, WO9735686, US5272897.



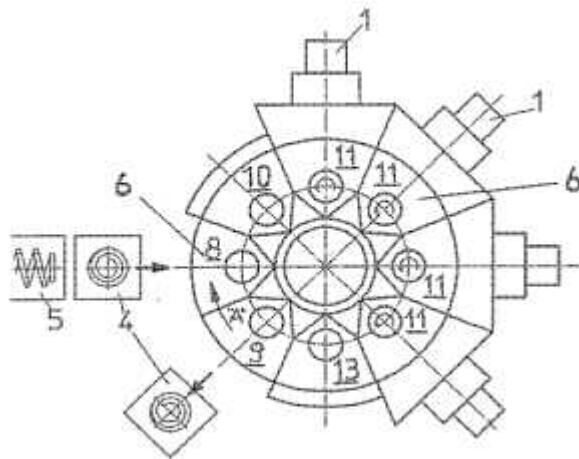
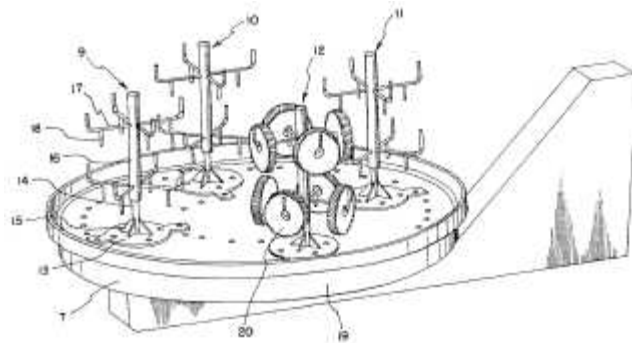
## B24C 3/24

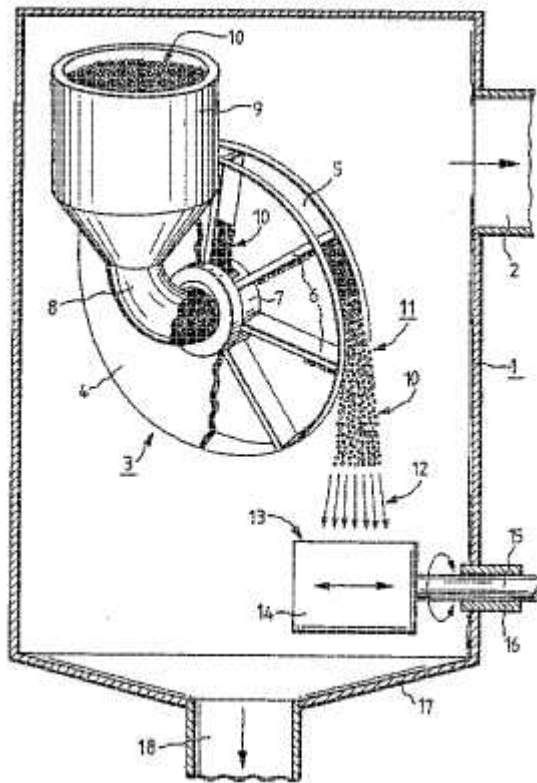
### Apparatus using impellers

#### Definition statement

*This subclass/group covers:*

Example(s): US6726548, DE4408643, DE4415094.





## B24C 3/26

the work being supported by barrel cages, i.e. tumblers;  
Gimbal mountings therefor

### Definition statement

*This subclass/group covers:*

Example(s): JP60034270, EP1172177, WO20040048036.

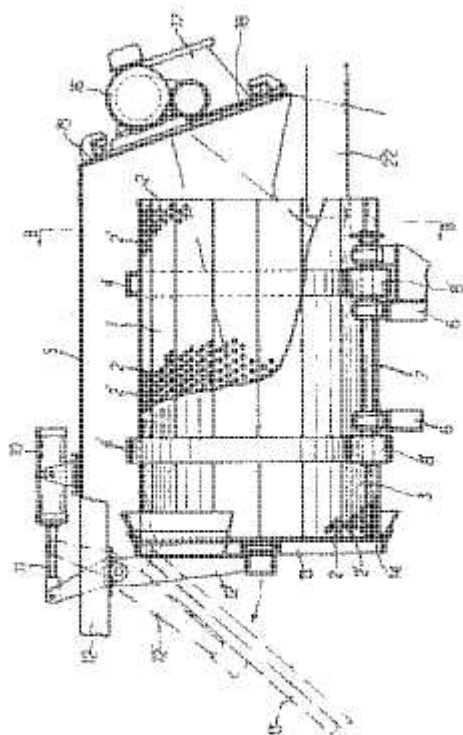
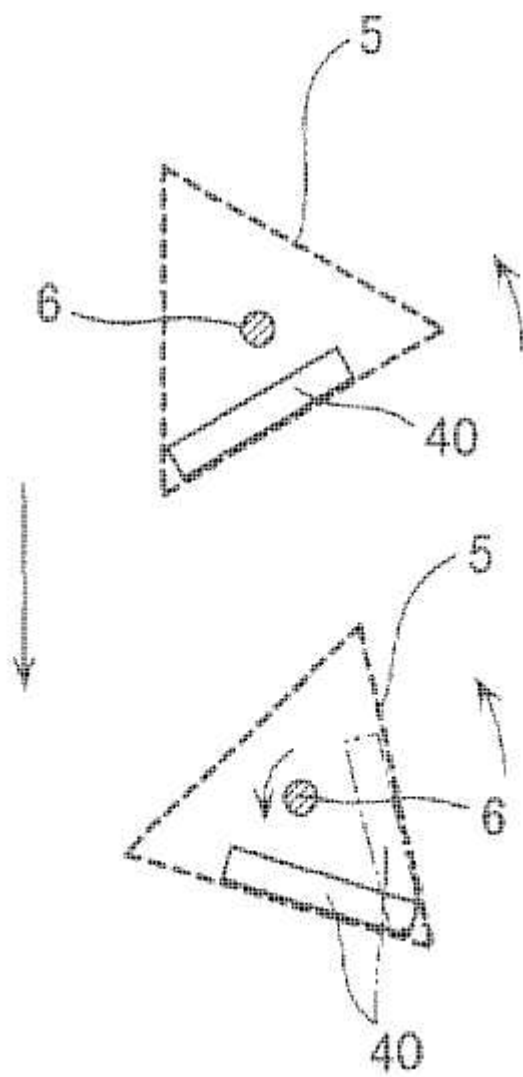
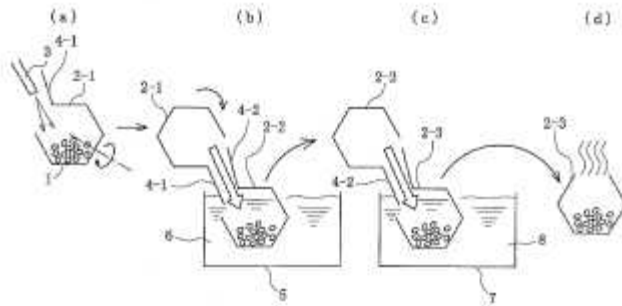


FIG. 1





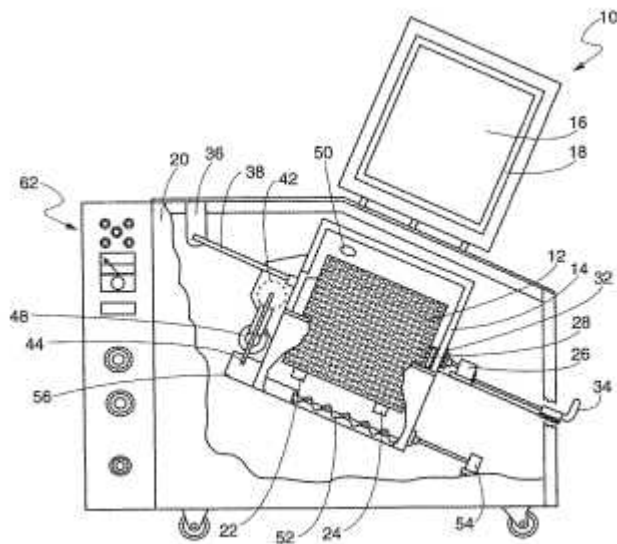
## B24C 3/263

[N: using refrigerating means]

### Definition statement

*This subclass/group covers:*

Example(s): US6059640.



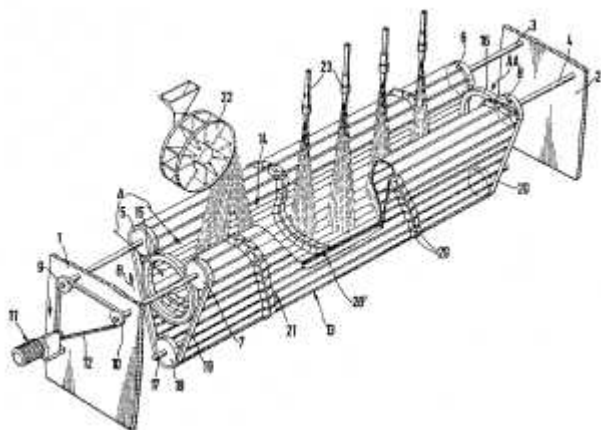
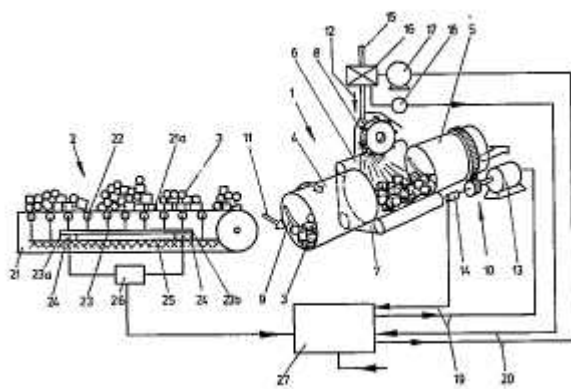
## B24C 3/266

[N: for continuously travelling workpieces]

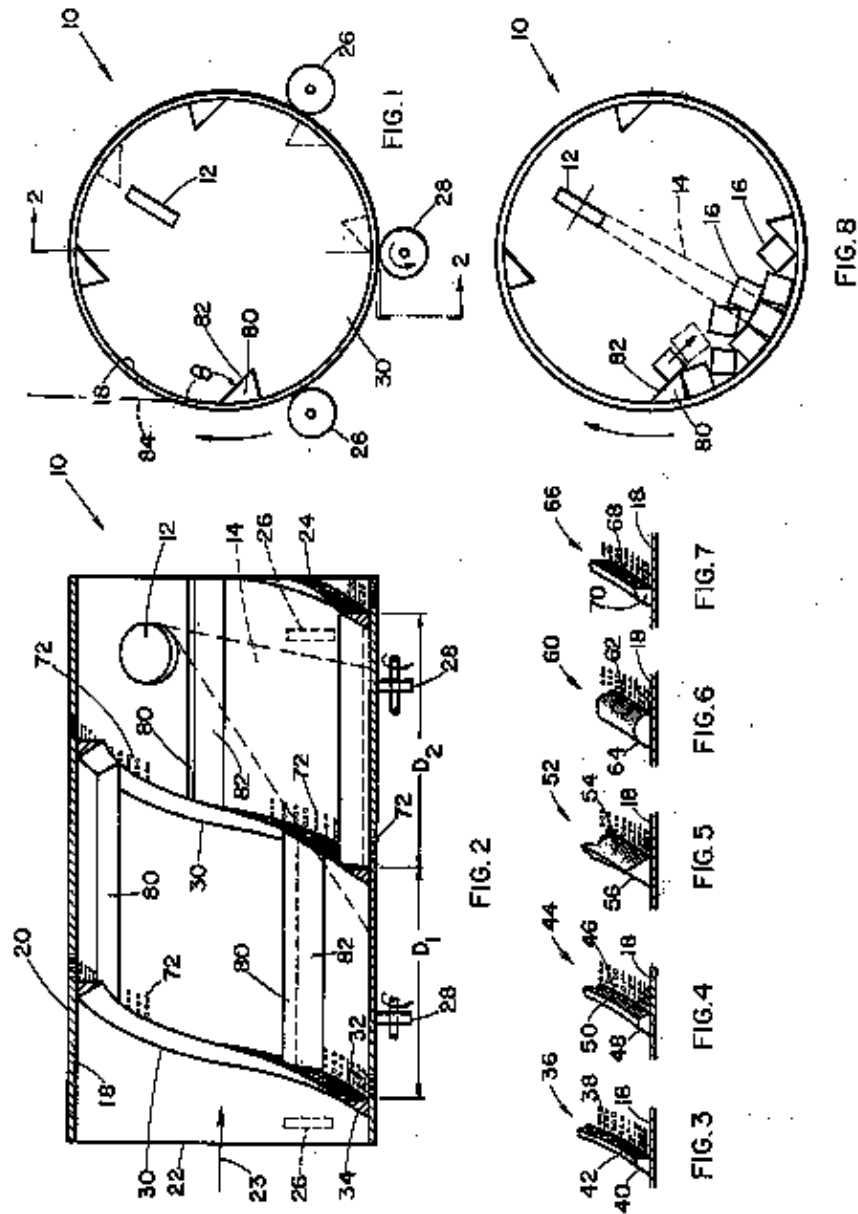
### Definition statement

*This subclass/group covers:*

Example(s): CH665987, US4218854, US4003164.







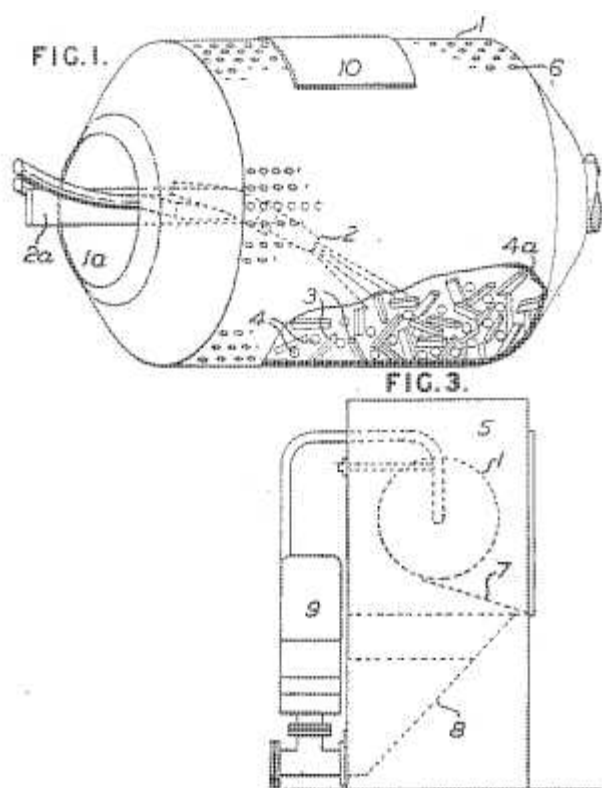
B24C 3/28

Apparatus using nozzles

### Definition statement

*This subclass/group covers:*

Example(s): GB851361.



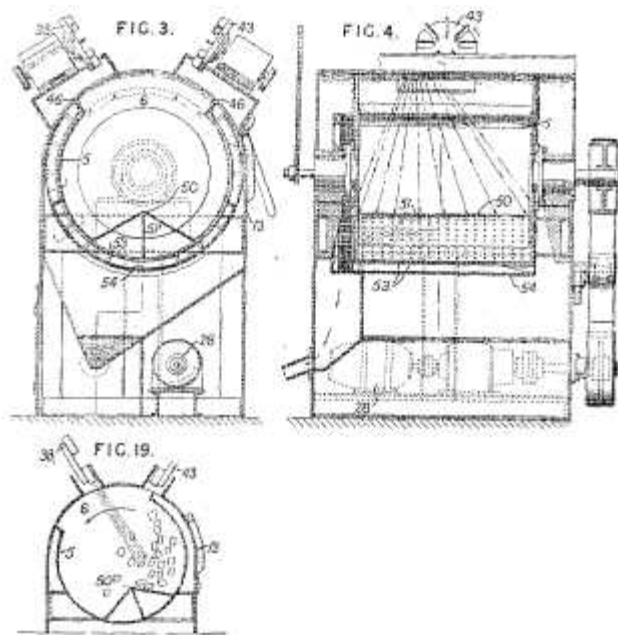
### B24C 3/30

#### Apparatus using impellers

### Definition statement

*This subclass/group covers:*

Example(s): GB592600.



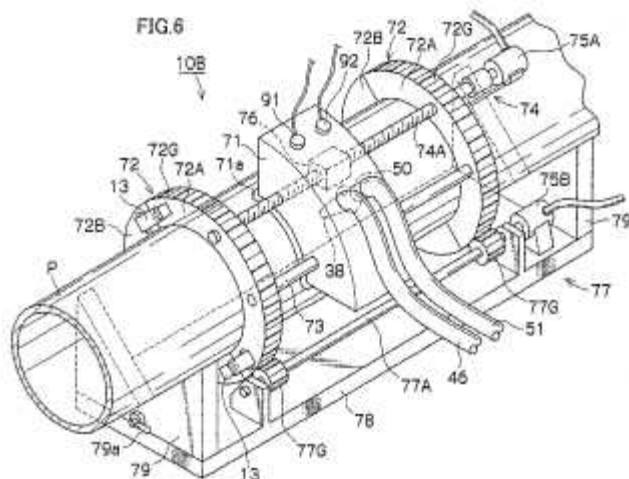
## B24C 3/32

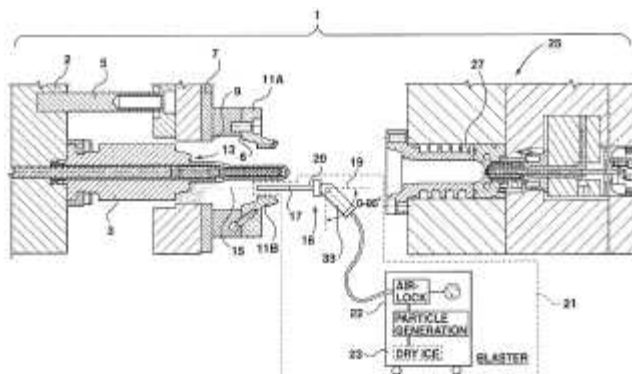
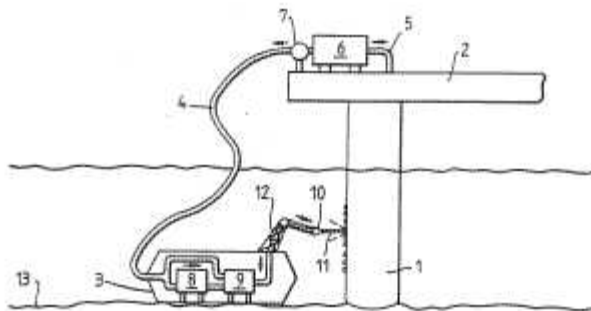
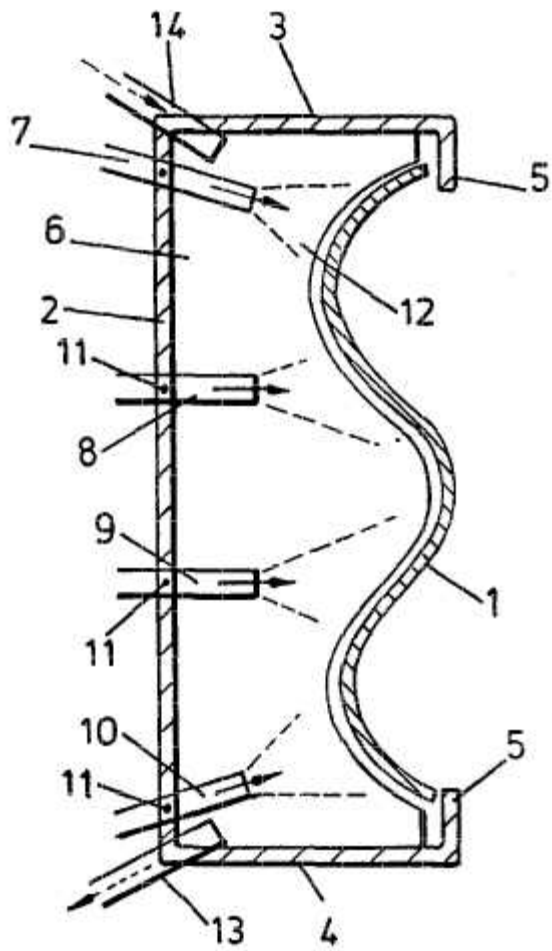
designed for abrasive blasting of particular work, e.g. the internal surfaces of cylinder blocks (B24C3/08, B24C3/18 take precedence)

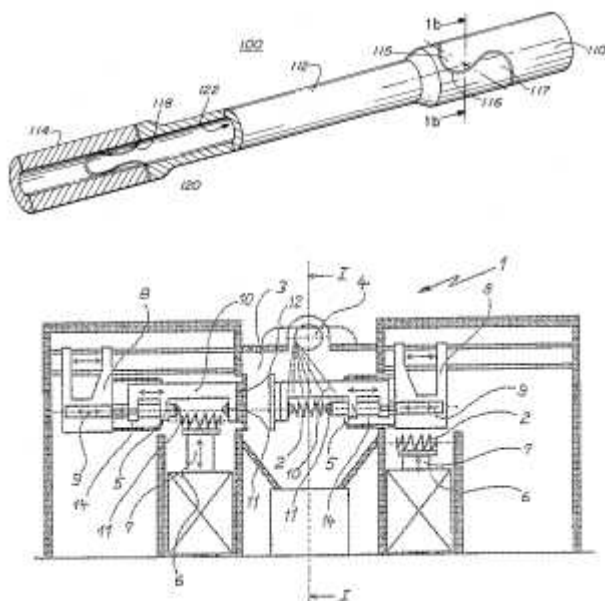
### Definition statement

*This subclass/group covers:*

Example(s): EP1754573, WO9505922, GB2249045, US20030070693 (method for cleaning and injection mould), US5512007 (flexible connection), DE4408645 (springs).







## Special rules of classification within this group

Contrary to the take-precedence-rules in the title of this subgroup, documents relating to the aspects of subgroup [B24C 3/08](#) (abrasive blasting of traveling or moving workpieces) and documents relating to the aspects of subgroup [B24C 3/18](#) (with means for moving workpieces into different working positions) are covered in this subgroup [B24C 3/32](#) when additionally relating to the aspects of this subgroup [B24C 3/32](#) (designed for abrasive blasting of particular work).

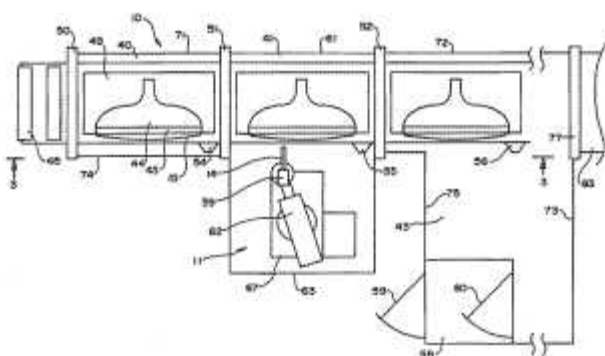
## B24C 3/322

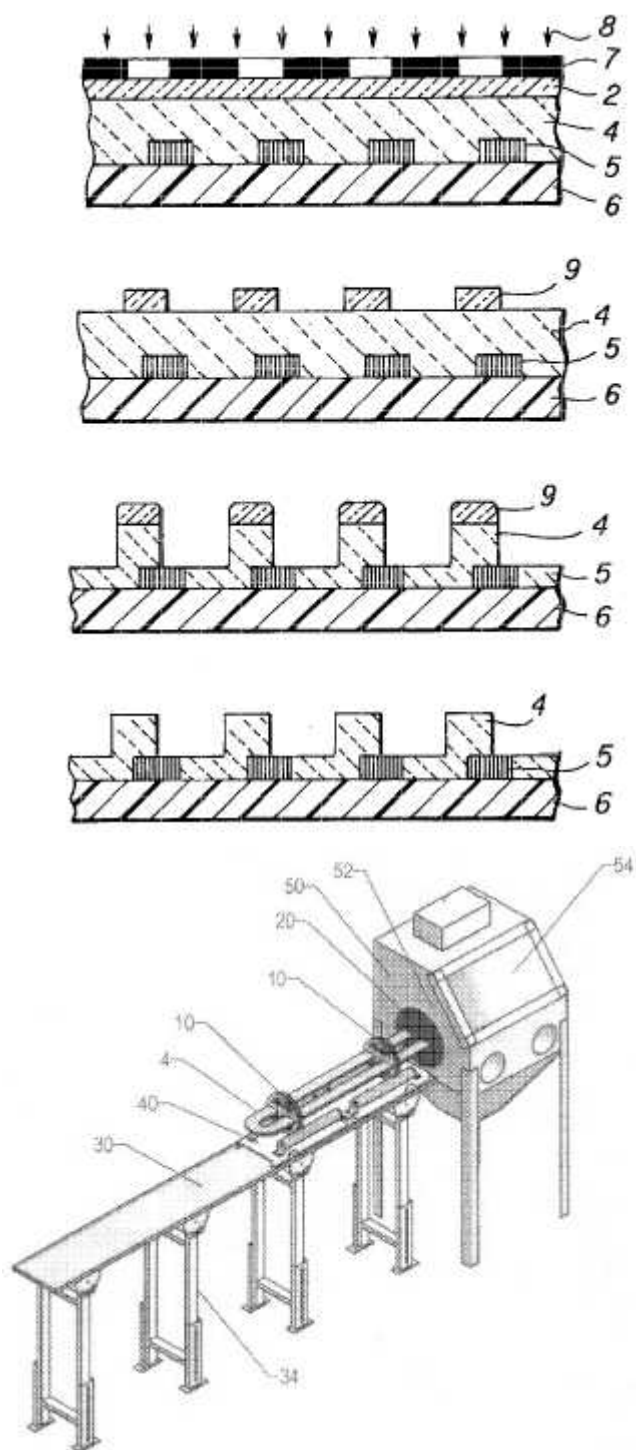
[N: for electrical components]

## Definition statement

*This subclass/group covers:*

Example(s): WO9528256 (blasting of CRT), US5916738, US20100068976 (blasting of motor conductors).





## References relevant to classification in this subclass

*This subclass/group does not cover:*

Blasting semiconductor devices e.g. with a jet of particulate matter acting like sand blasting	<a href="#">H01L 21/3046</a>
--	------------------------------

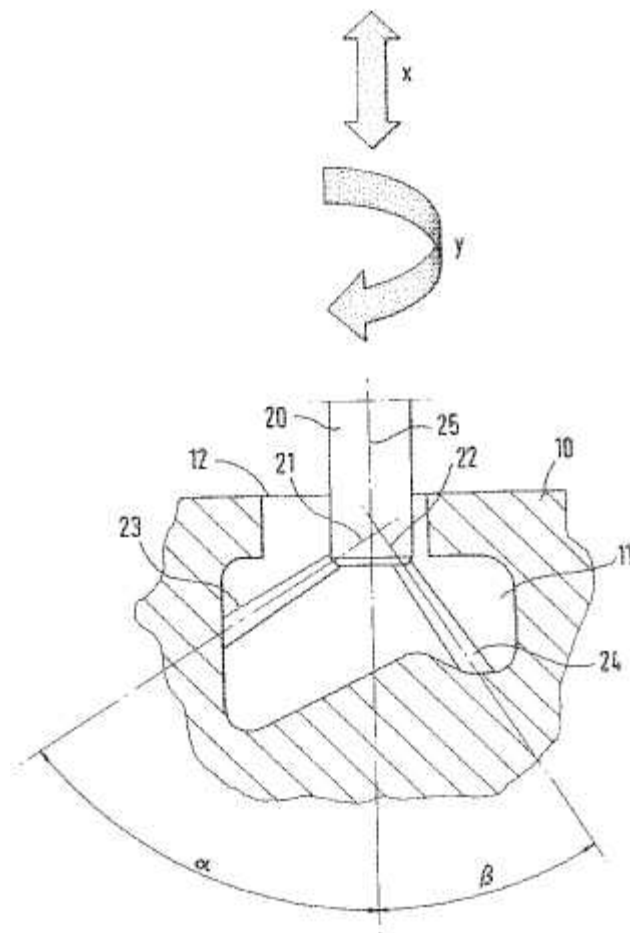
## B24C 3/325

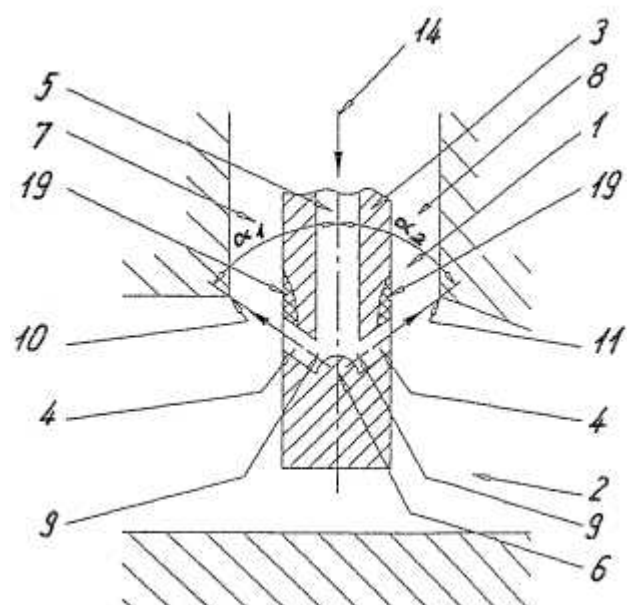
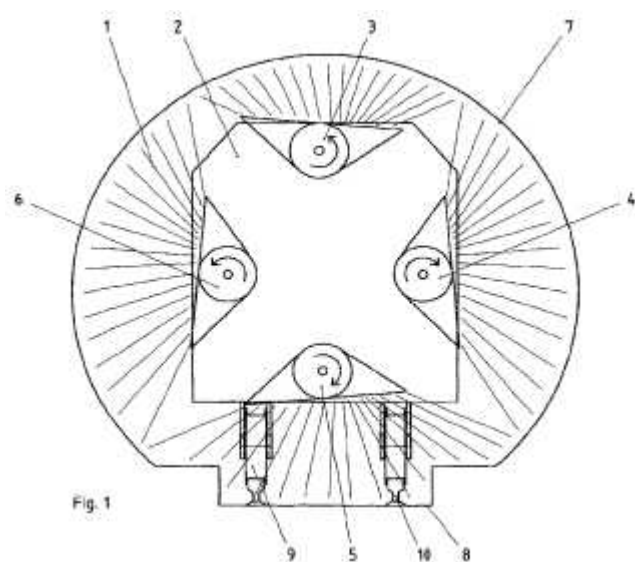
[N: for internal surfaces, e.g. of tubes]

### Definition statement

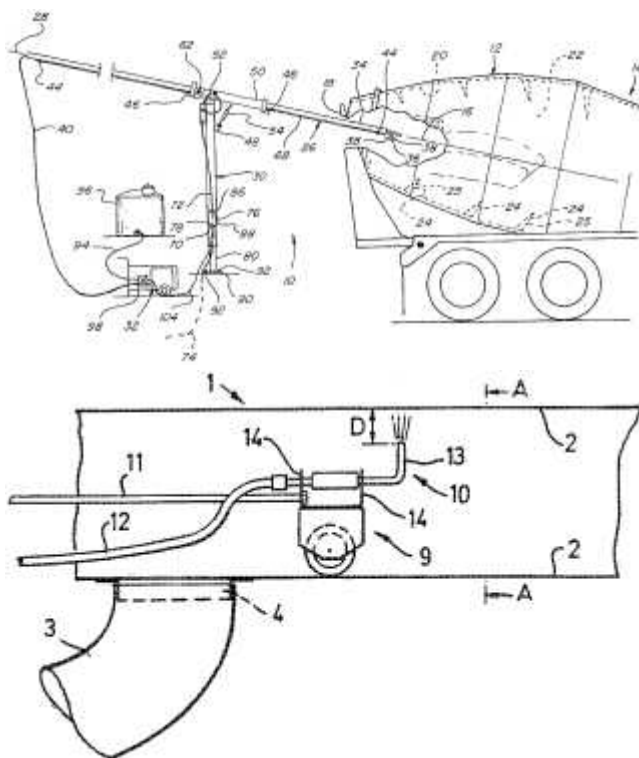
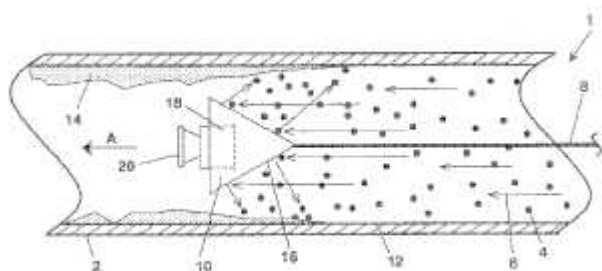
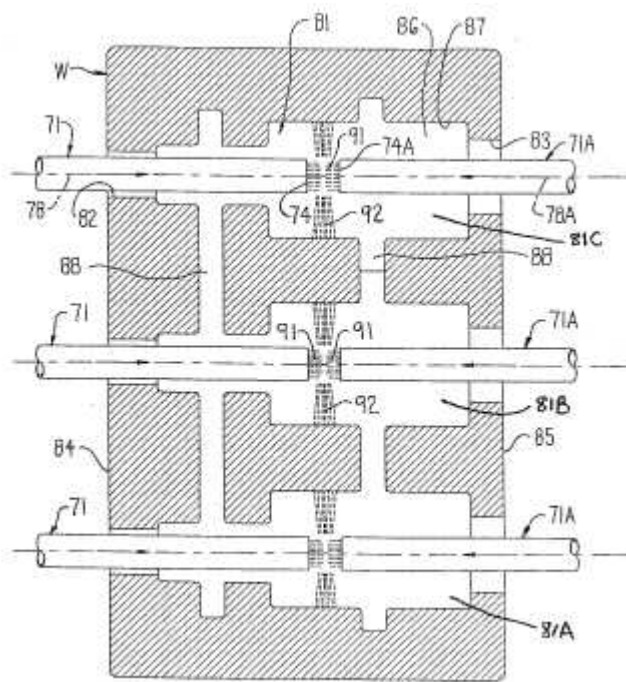
*This subclass/group covers:*

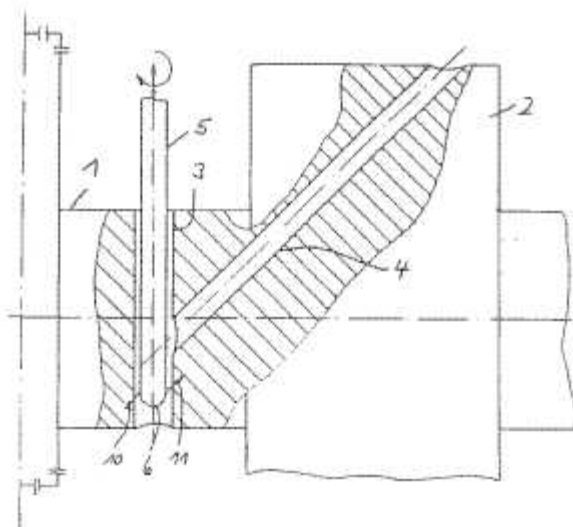
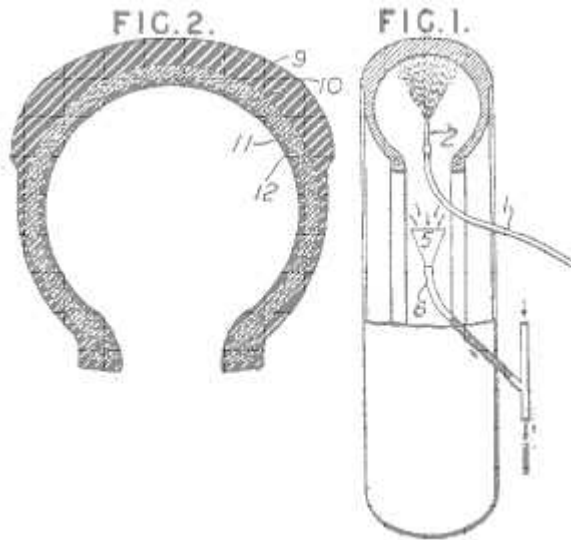
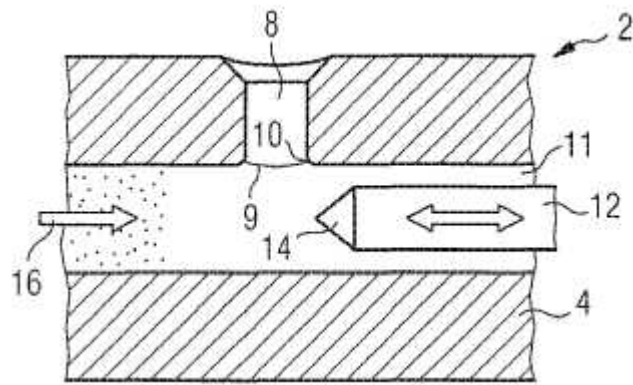
Example(s): DE1020070006661, EP1898003 (blasting of tunnel walls), EP1901894, US20040162009 (internal blasting of motor block), DE10341029, US20020179119 (internal blasting of concrete mixer), US6402854, EP1423237, GB850045, DE4015412.











### B24C 3/327

by an axially-moving flow of abrasive particles without passing a blast gun, impeller or the like along the internal surface (polishing or abrading surfaces using plastically deformable grinding compound, moved relatively to the

workpiece under the influence of pressure B24B31/116)

### Definition statement

*This subclass/group covers:*

Blasting of internal surfaces with particulate matter and without passing a blast gun, impeller or the like along the internal surface. The flow is considered as blasting only when the dynamic viscosity of the carrier is less than or equal to that of conventional fuels like diesel, e.g. when water is used as a carrier.

Example(s): EP1312432, US5391256, DE4420579.

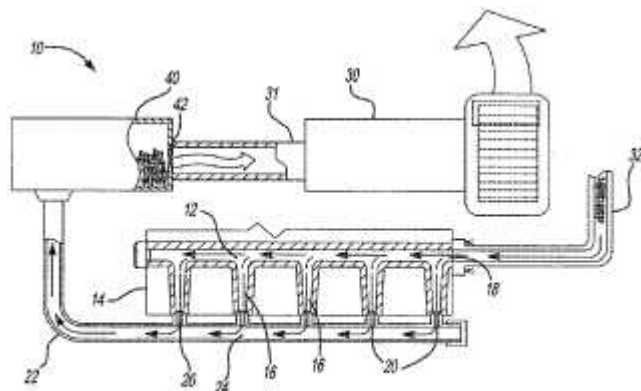
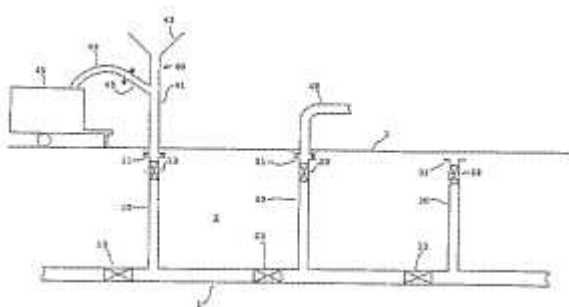
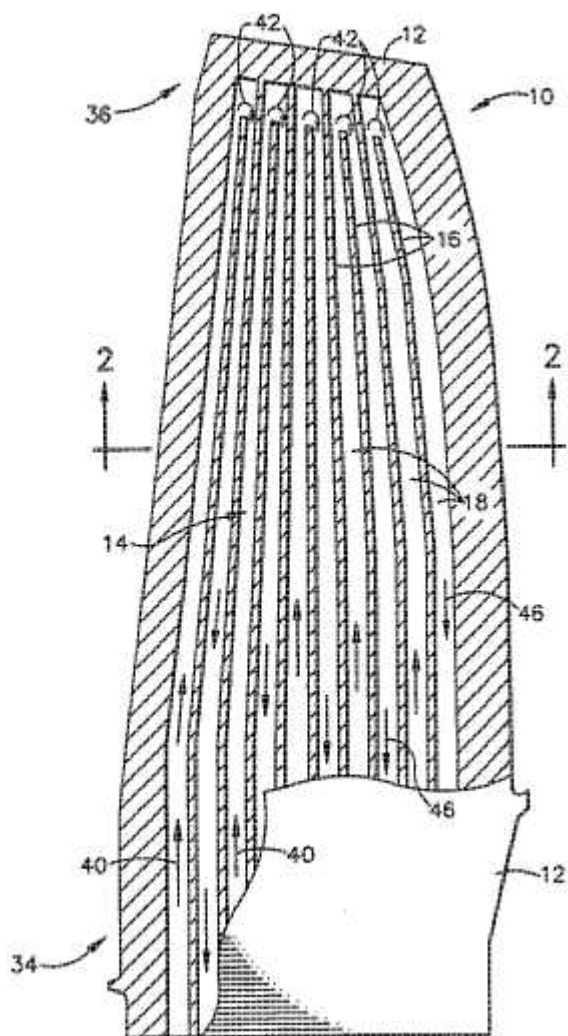


Fig-2



## References relevant to classification in this group

*This subclass/group does not cover:*

Machining of internal surfaces with plastically deformable grinding compound, i.e. when the dynamic viscosity of the carrier medium is higher than that of conventional fuels like diesel

[B24B 31/116](#)

---

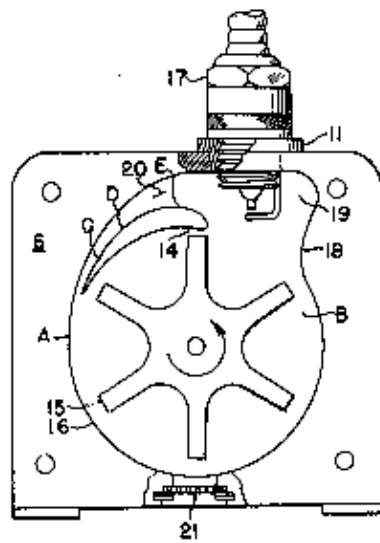
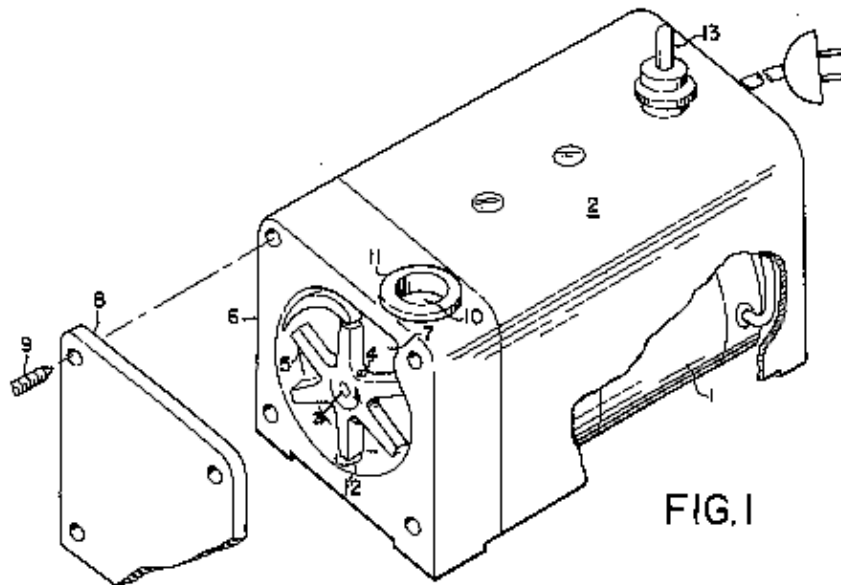
## **B24C 3/34**

**for cleaning sparking plugs**

### **Definition statement**

*This subclass/group covers:*

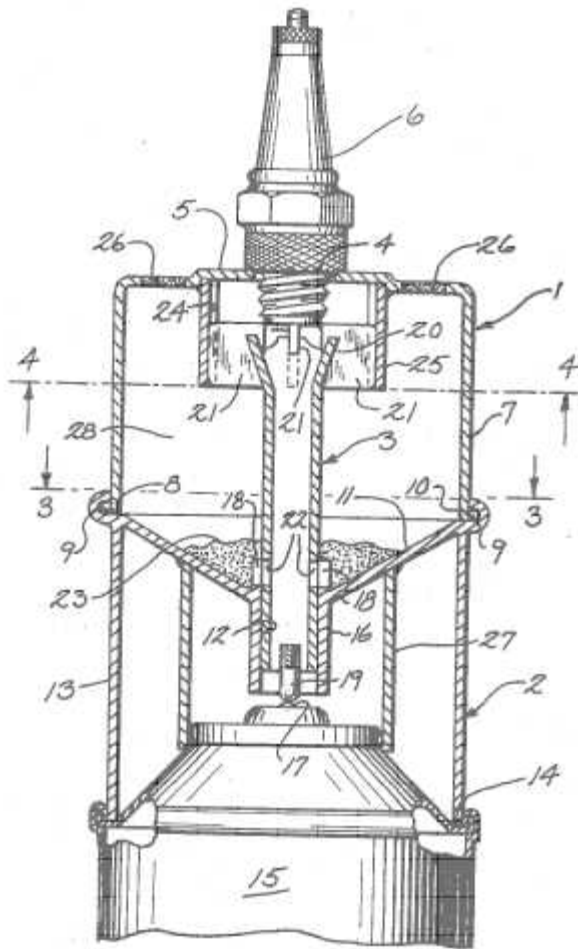
Example(s): US3704552, US3913273.



INVENTORS  
BUD K. BEAVER  
A. DAVID ZAKARIAN

BY

Tom Sherrard, atty.



## B24C 5/00

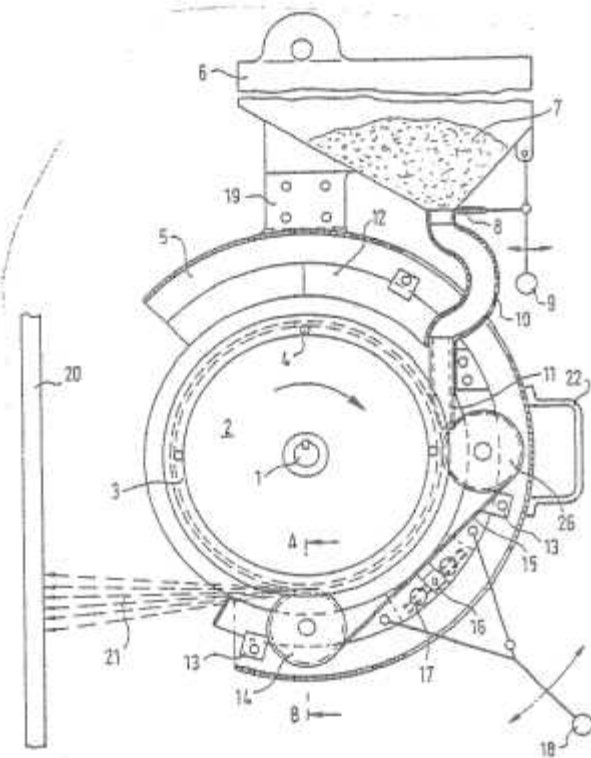
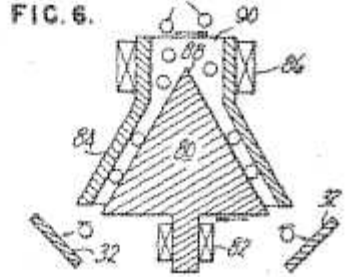
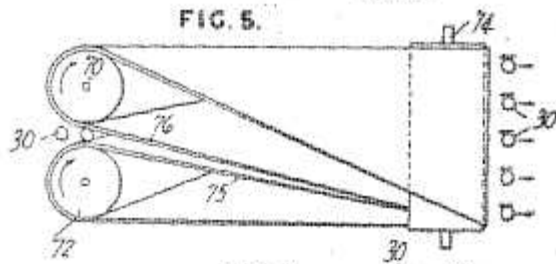
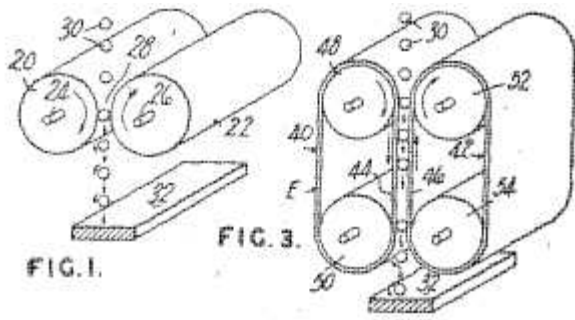
### Devices or accessories for generating abrasive blasts

#### Definition statement

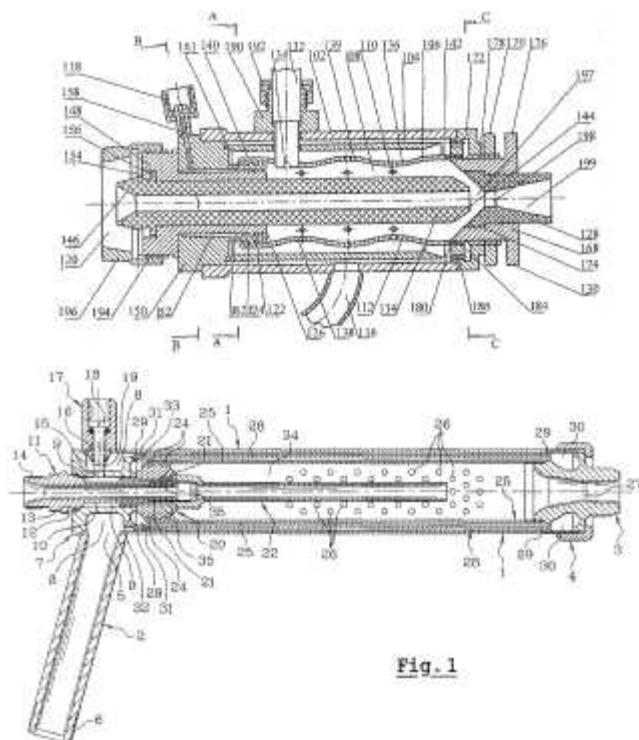
*This subclass/group covers:*

e.g. abrasive blasting with particles by jet flame processing.

Example(s): GB938025, US4616787, EP1539424 (jet flame abrasive blasting)  
EP1155781.







## Informative references

Attention is drawn to the following places, which may be of interest for search:

Attention is drawn to the following places, which may be of interest for search and classification:

Jet flame processing in general	<a href="#">B05B 7/205</a>
---------------------------------	----------------------------

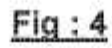
## B24C 5/005

[N: Vibratory devices, e.g. for generating abrasive blasts by ultrasonic vibrations (sonic cleaning in general B08B3/12 )]

## Definition statement

This subclass/group covers:

Example(s): EP1207013, FR2689431.



*Attention is drawn to the following places, which may be of interest for search:*

Sonic cleaning in general	<a href="#">B08B 3/12</a>
---------------------------	---------------------------

---

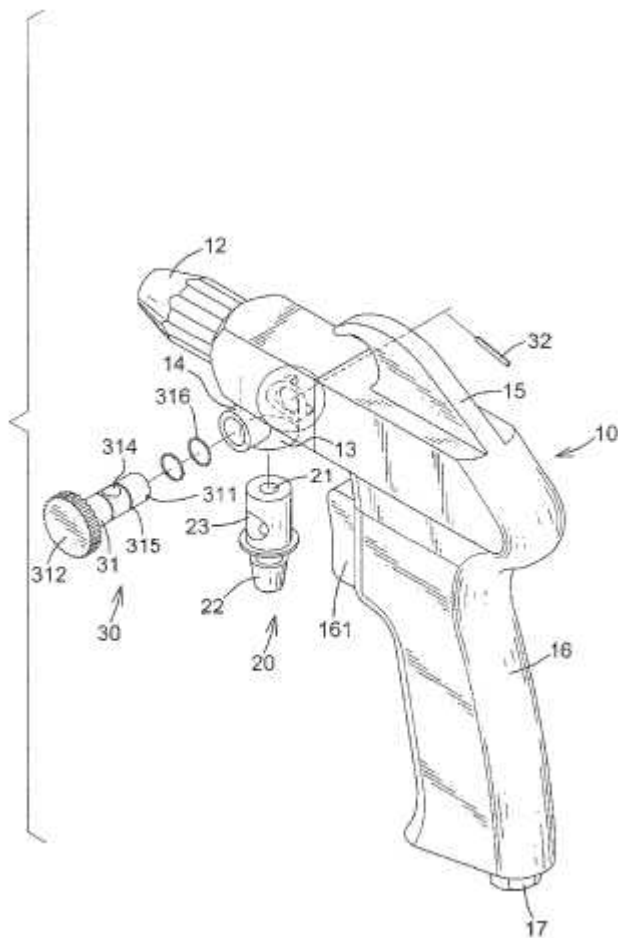
## B24C 5/02

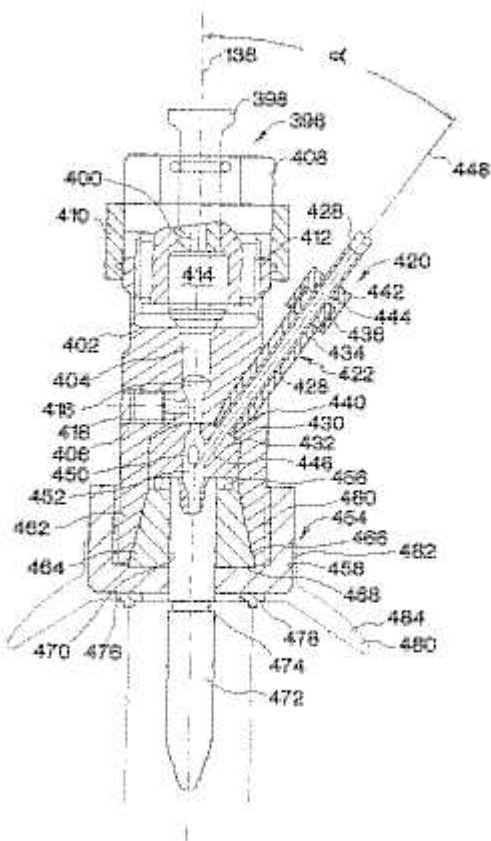
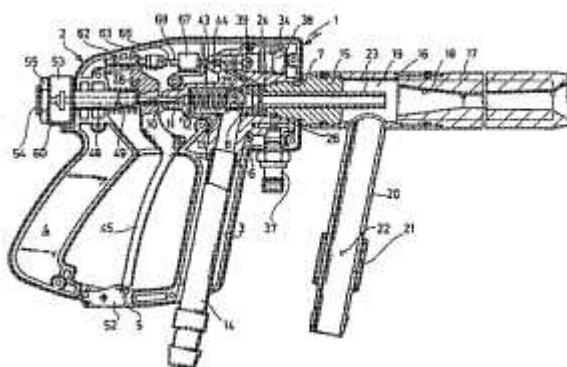
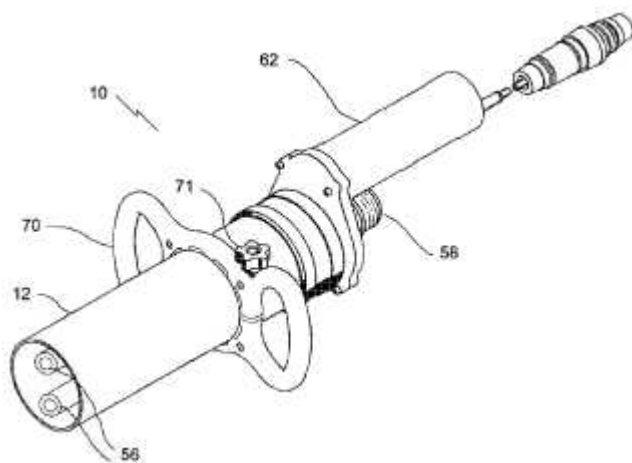
**Blast guns, e.g. for generating high velocity abrasive fluid jets for cutting materials [N: (perforating by fluid jet B26F1/26 )]**

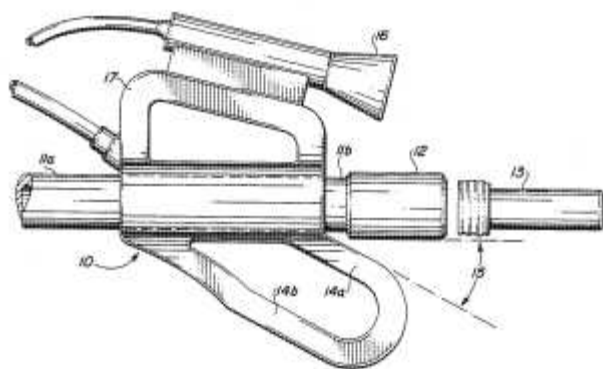
### Definition statement

*This subclass/group covers:*

Example(s): US7341504, US20060276112, DE19804233, US5908349, US4932592, EP0083614.









without particles	
Severing by means of a fluid jet without particles	<a href="#">B26F 3/004</a>

## B24C 5/04

### Nozzles therefor (nozzles in general B05B)

#### Definition statement

*This subclass/group covers:*

Example(s): EP1574290, FR2866586, DE10243855, WO03103899, EP1178873, US20030045217, US6695686, US5704825, US5484325.

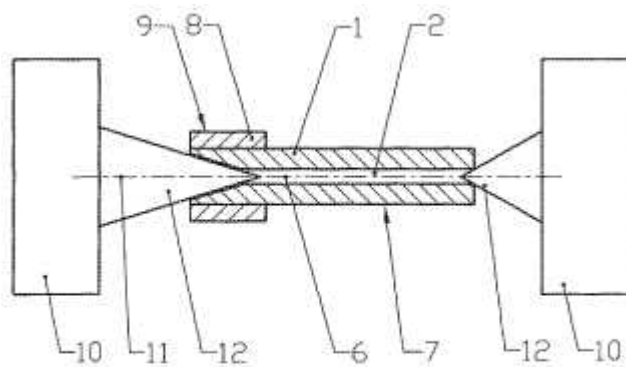
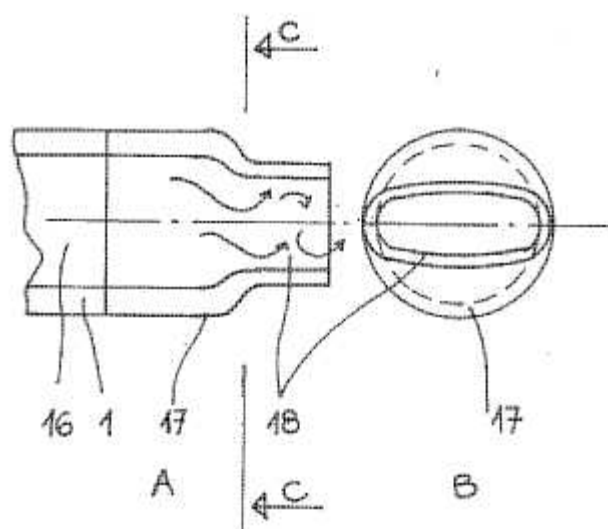
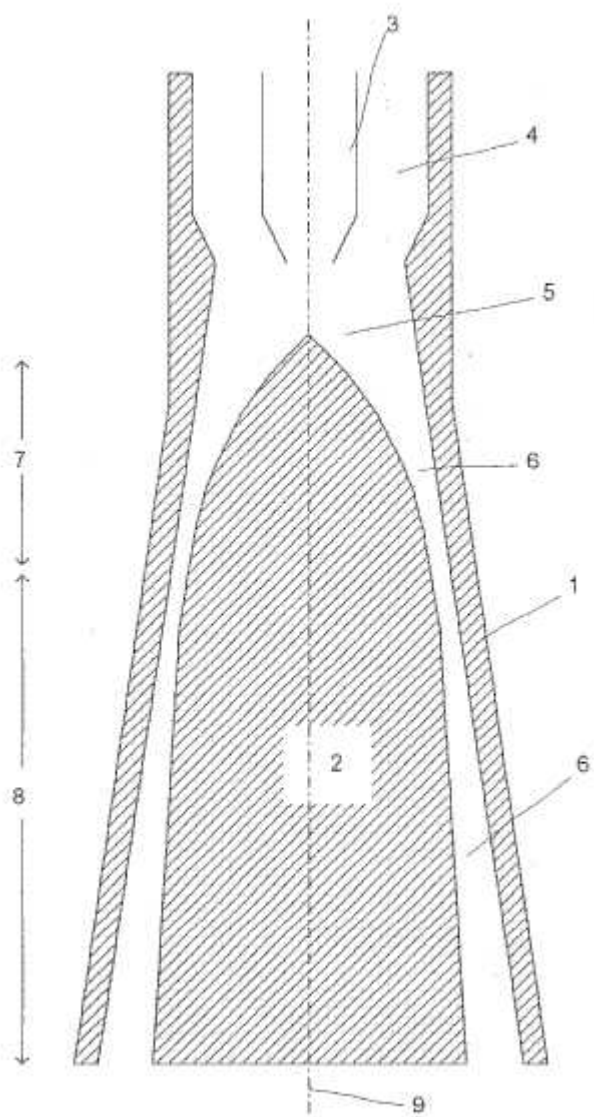


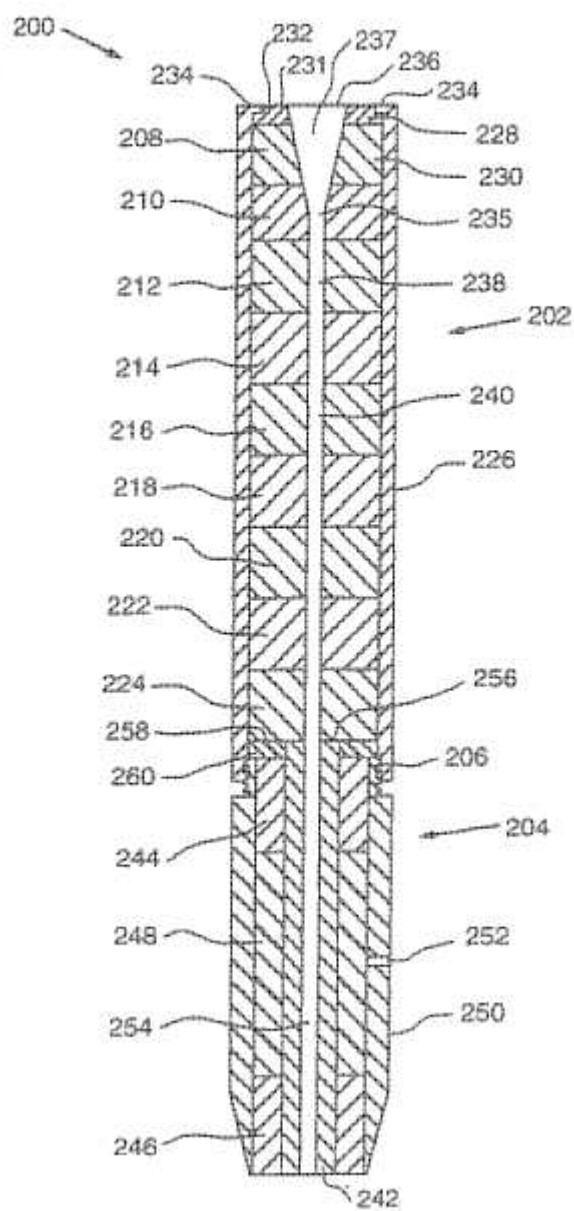
Fig. 5

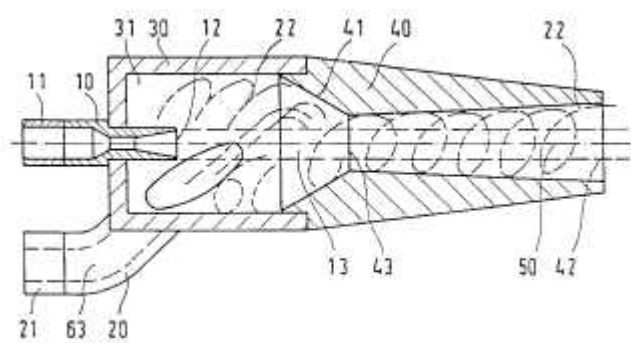
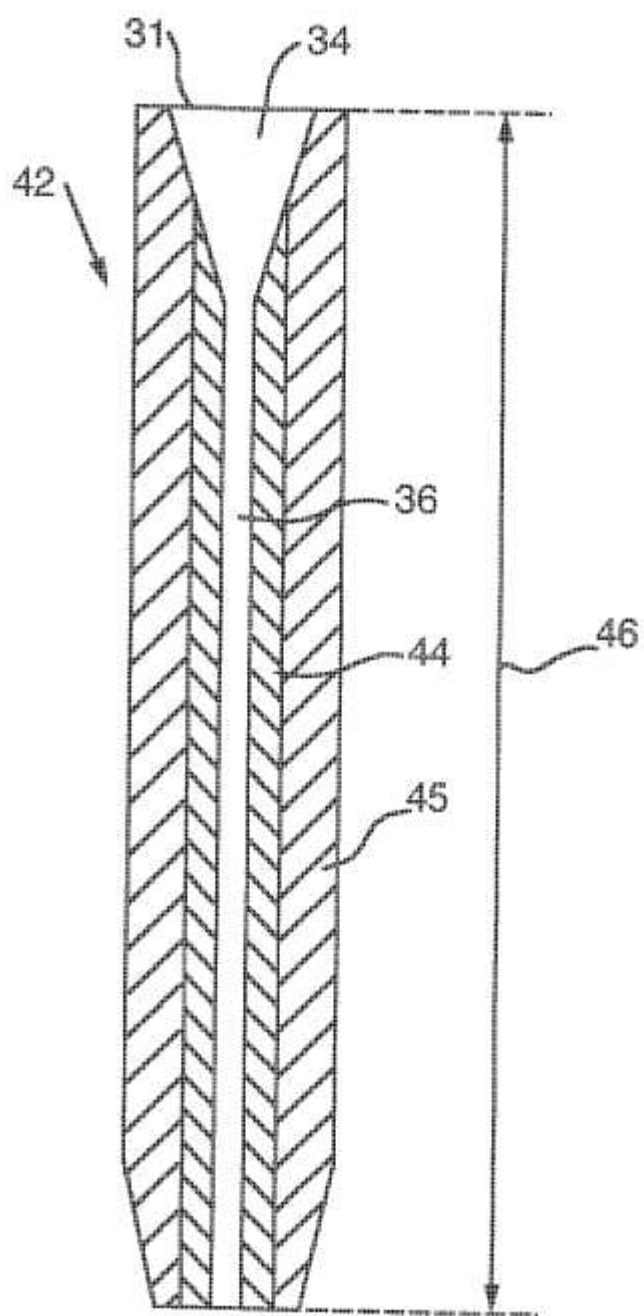


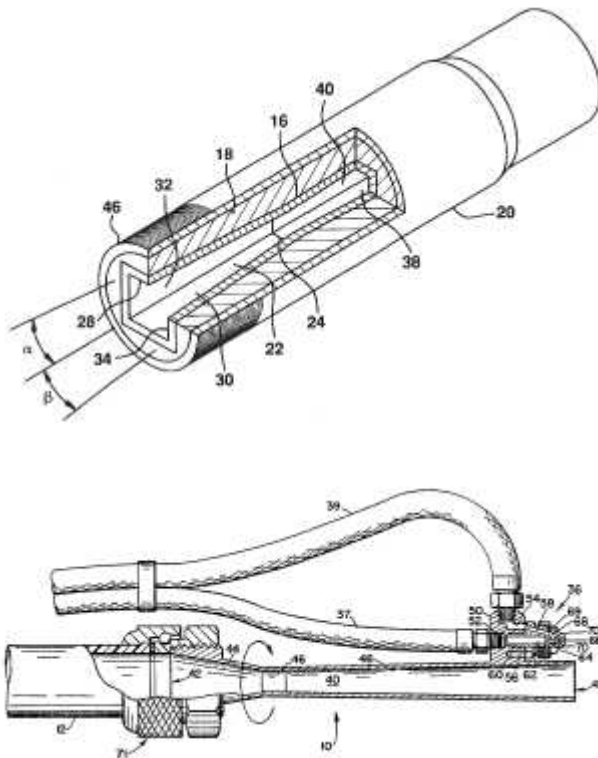












## Informative references

Attention is drawn to the following places, which may be of interest for search:

Attention is drawn to the following places, which may be of interest for search and classification:

Nozzles in general, Spraying or atomising in general	<a href="#">B05B</a>
--	----------------------

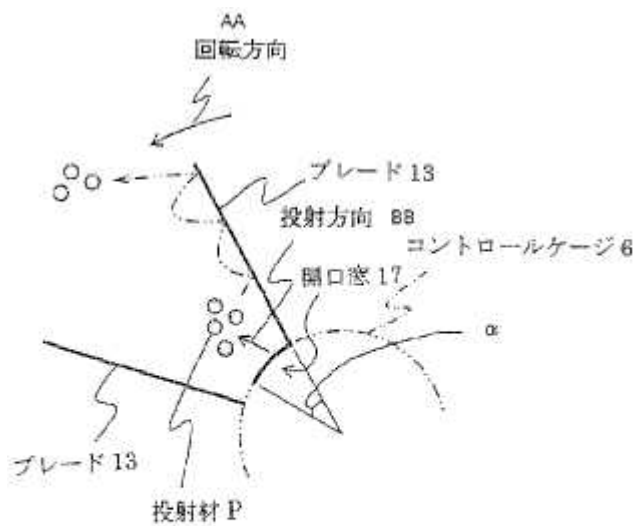
## B24C 5/06

Impeller wheels; Rotor blades therefor

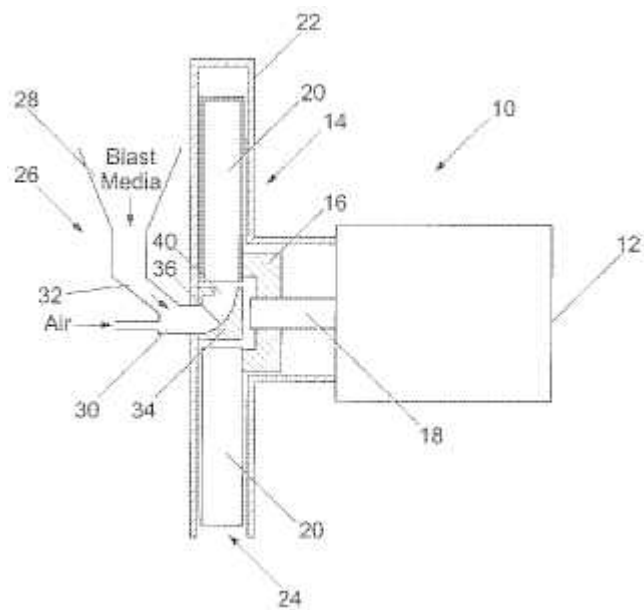
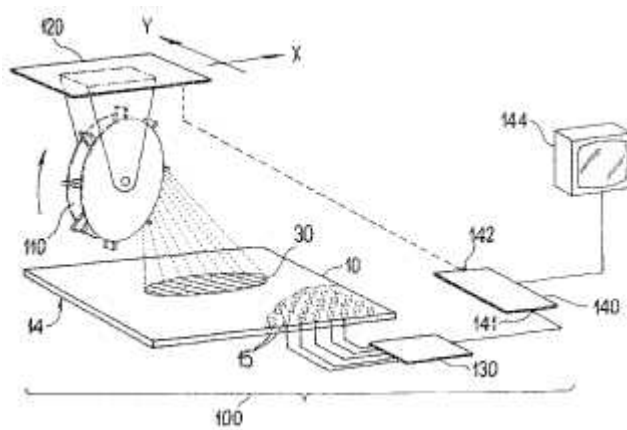
## Definition statement

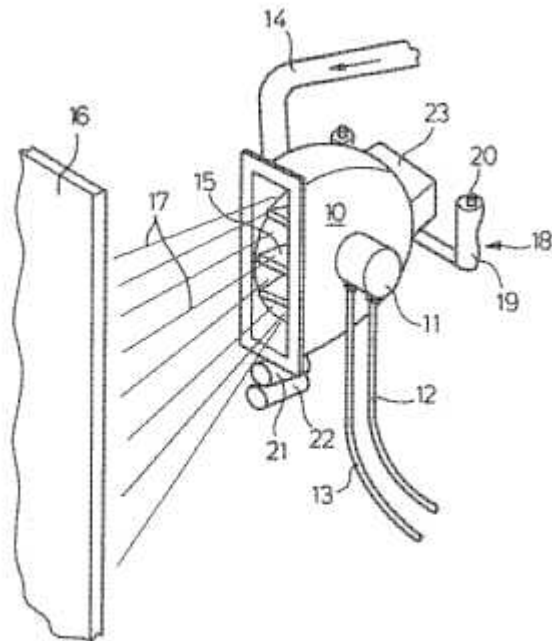
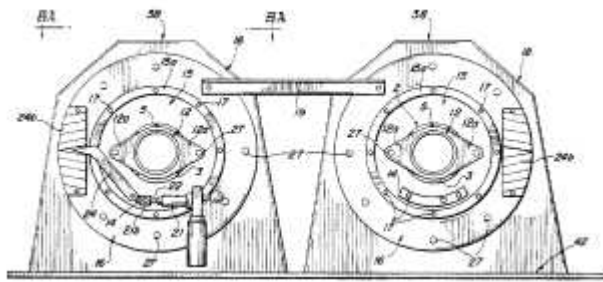
This subclass/group covers:

Example(s): WO20070072863, WO0239078, US6126516, US5779524, DE3505468.



AA ROTATION DIRECTION  
13 BLADE  
BB PROJECTION DIRECTION  
6 CONTROL CAGE  
17 OPENING WINDOW  
P PROJECTION ELEMENT





## B24C 5/062

[N: Rotor blades or vanes; Locking means therefor]

### Definition statement

*This subclass/group covers:*

Example(s): EP1352713, US5759091, EP0688633, GB985743, GB1101107, US4069025.

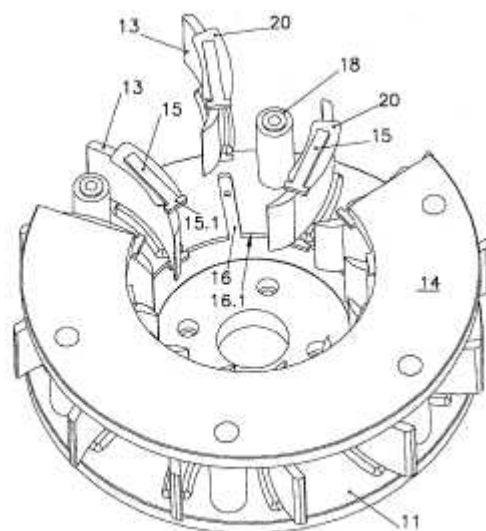
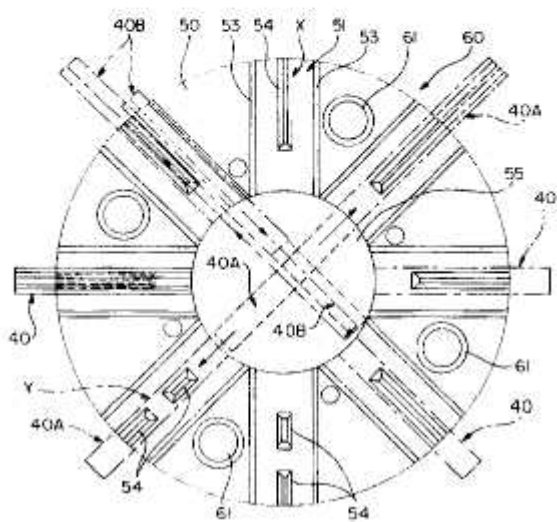
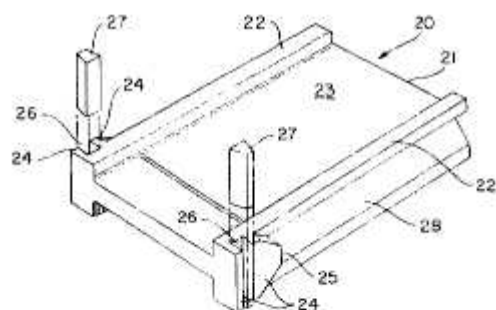


Fig. 3



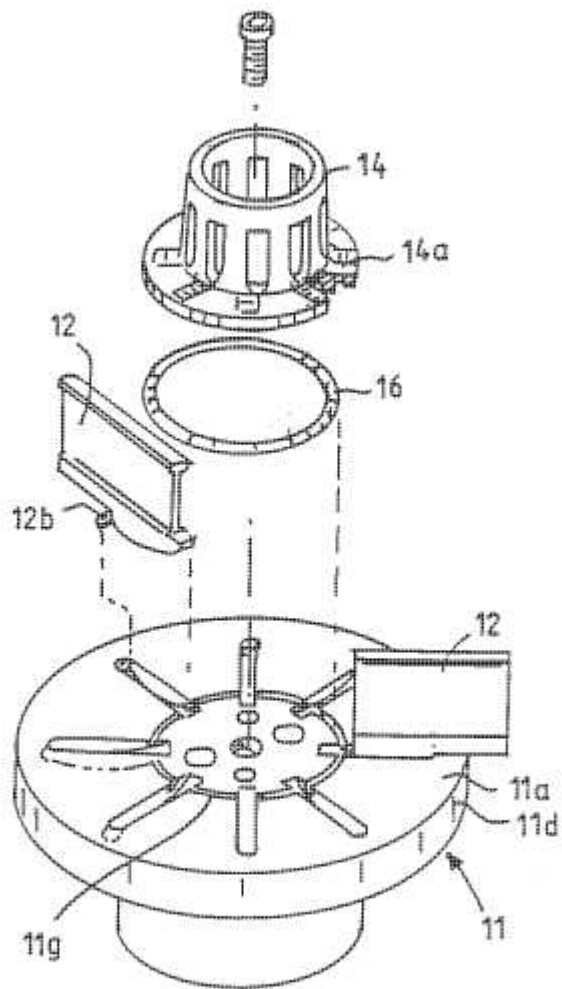


FIGURE 1



Fig. 2

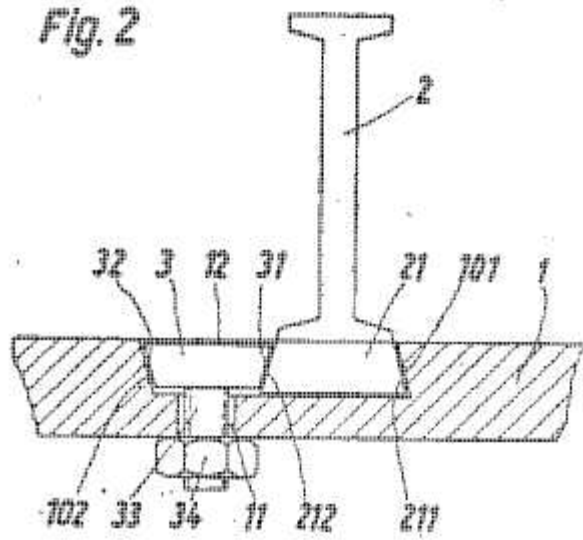
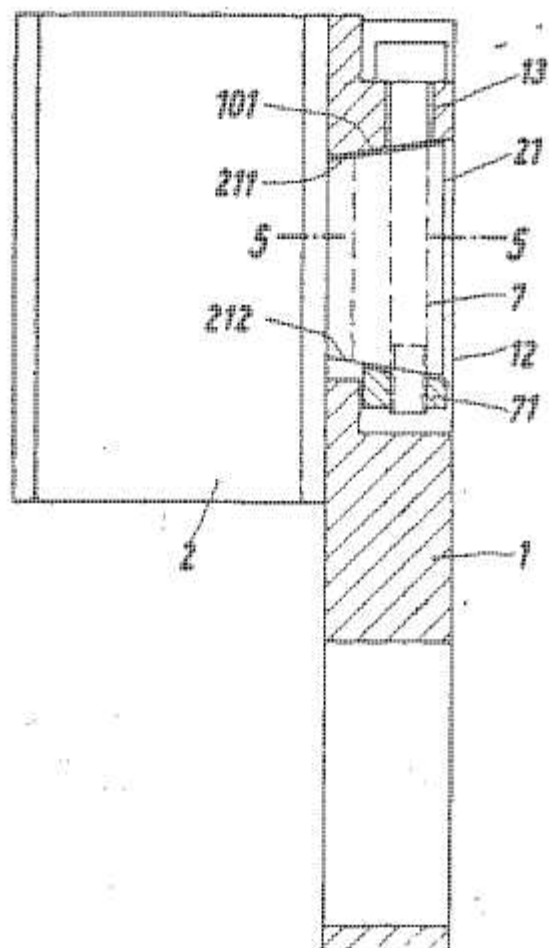
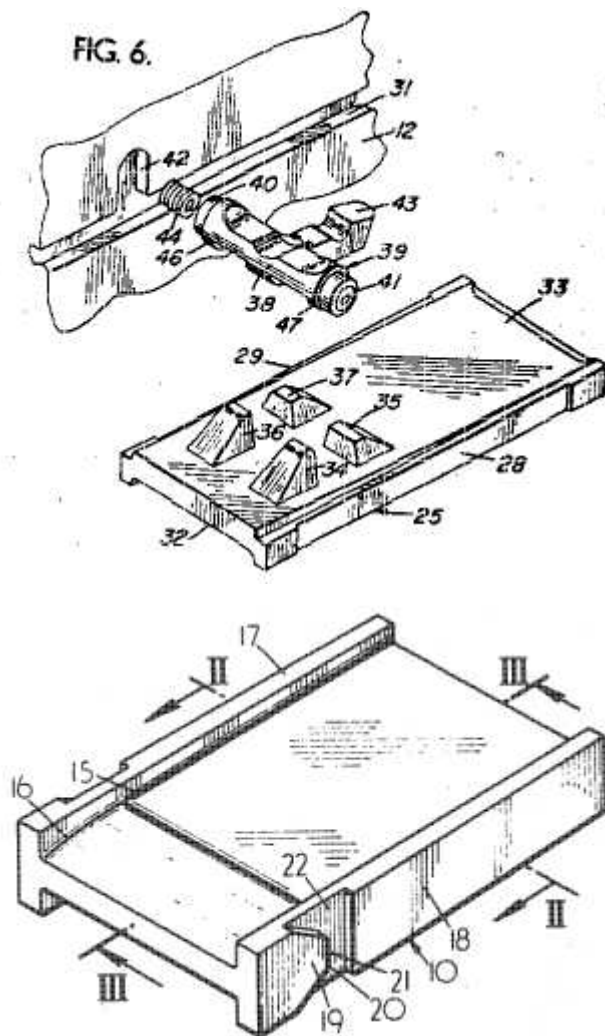


Fig. 4





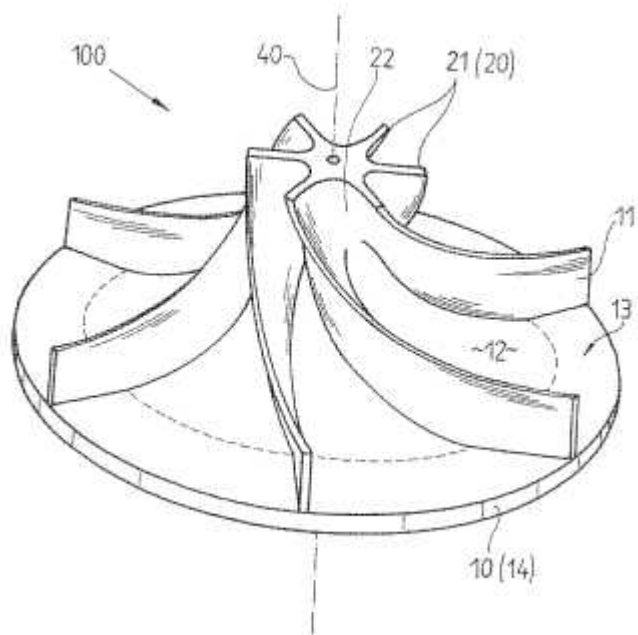
## B24C 5/064

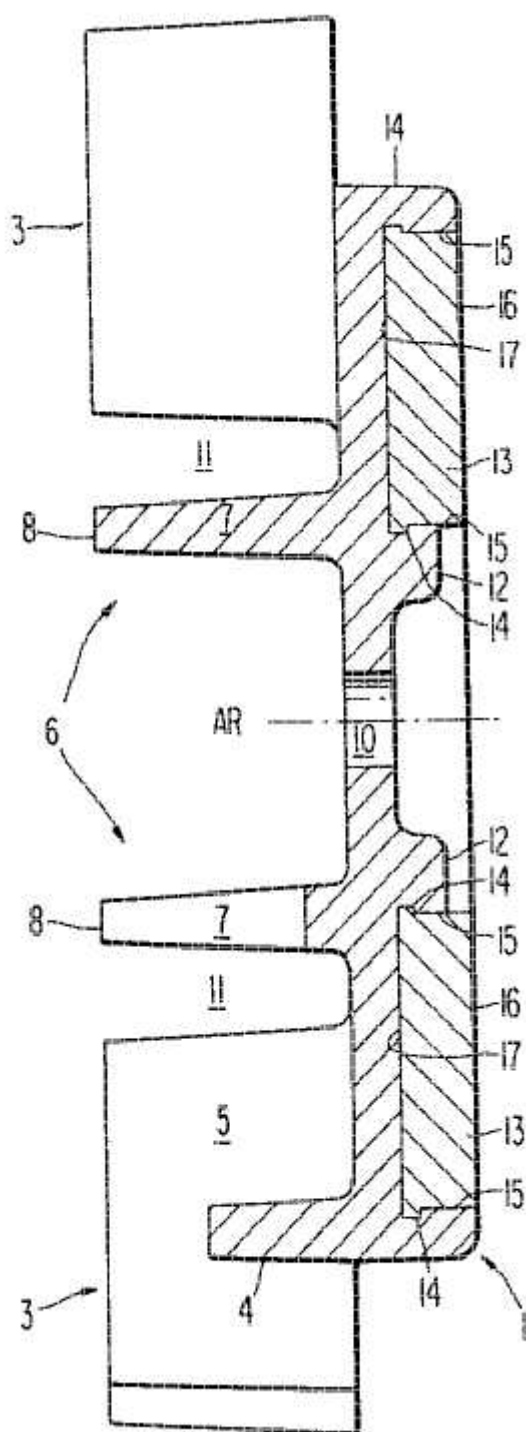
[N: One-piece wheels; Integral impeller units, e.g. made by casting]

### Definition statement

*This subclass/group covers:*

Example(s): EP1412133, US4244150.





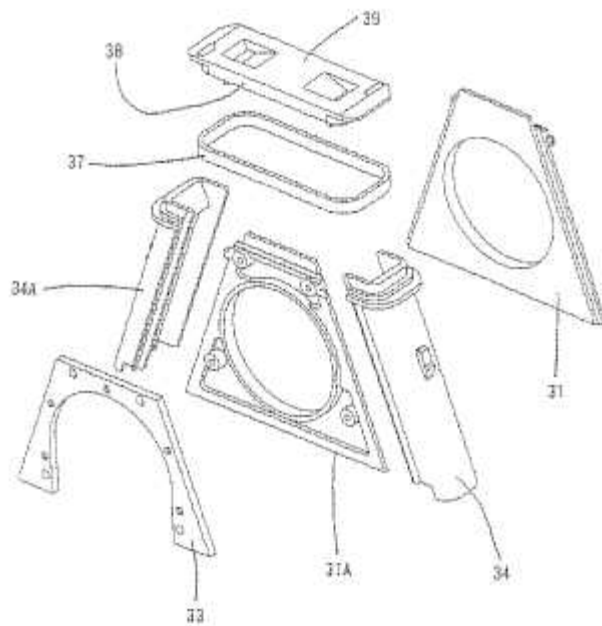
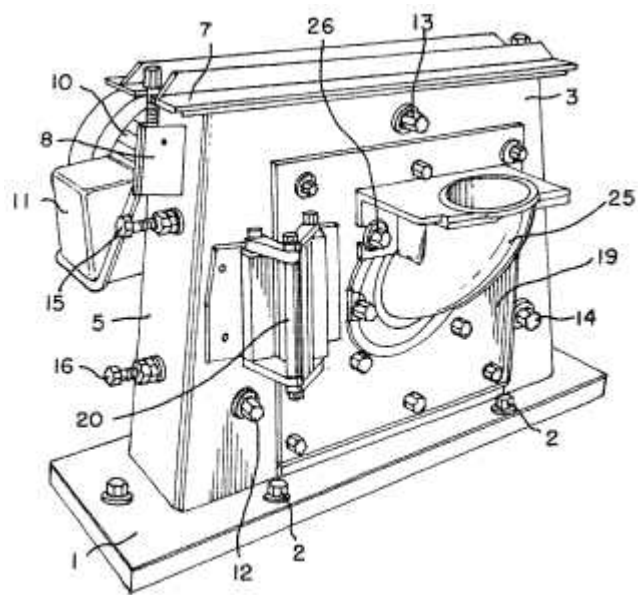
## B24C 5/066

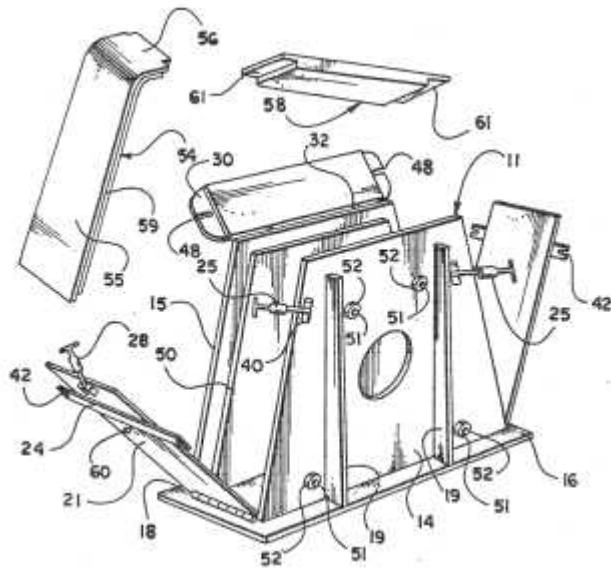
[N: Housings; Accessories therefor, e.g. liners]

### Definition statement

*This subclass/group covers:*

Example(s): US6692340, WO0200393, US5076028.





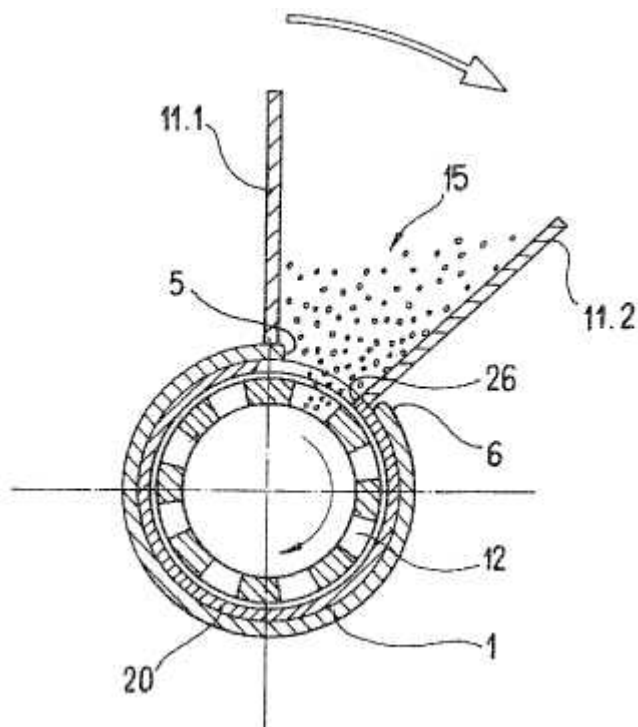
## B24C 5/068

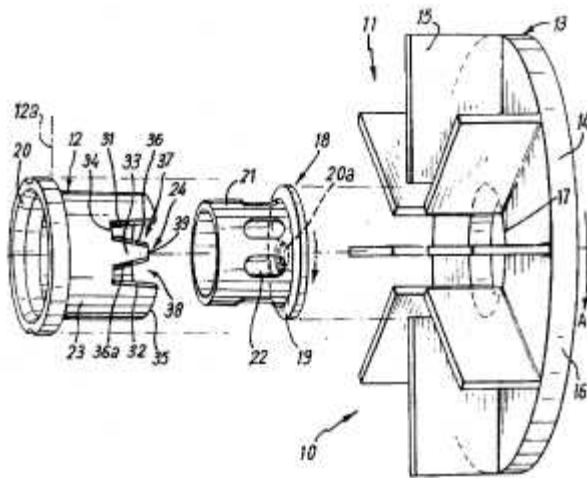
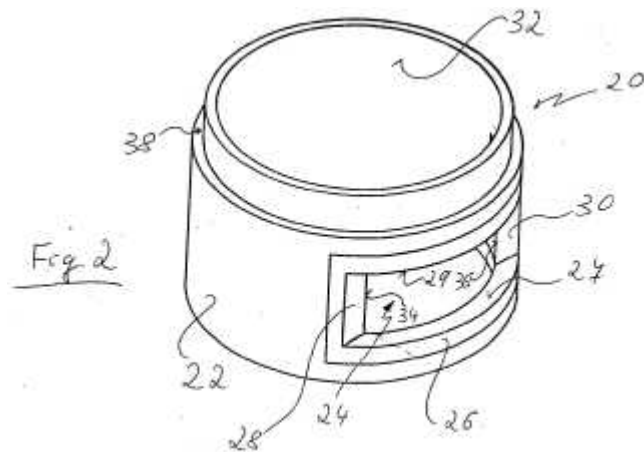
[N: Transferring the abrasive particles from the feeding means onto the propeller blades, e.g. using central impellers]

### Definition statement

*This subclass/group covers:*

Example(s): EP1360035, EP1354667, US5688162.





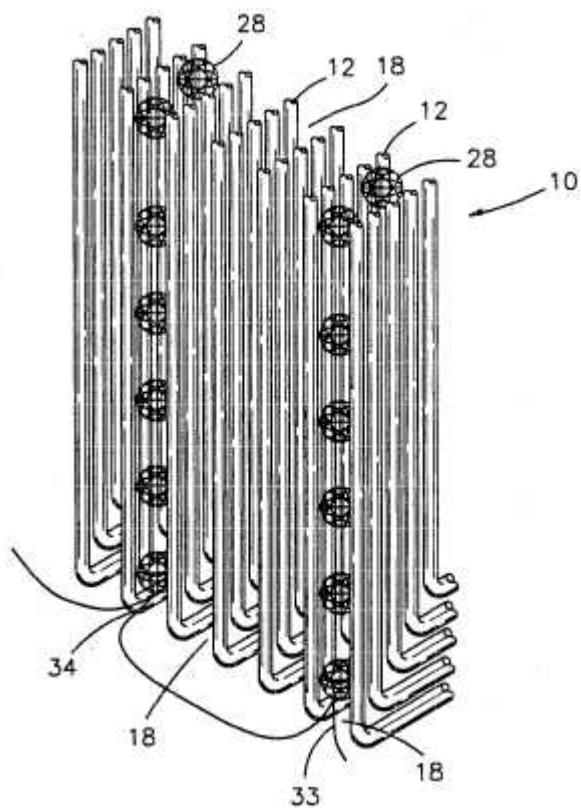
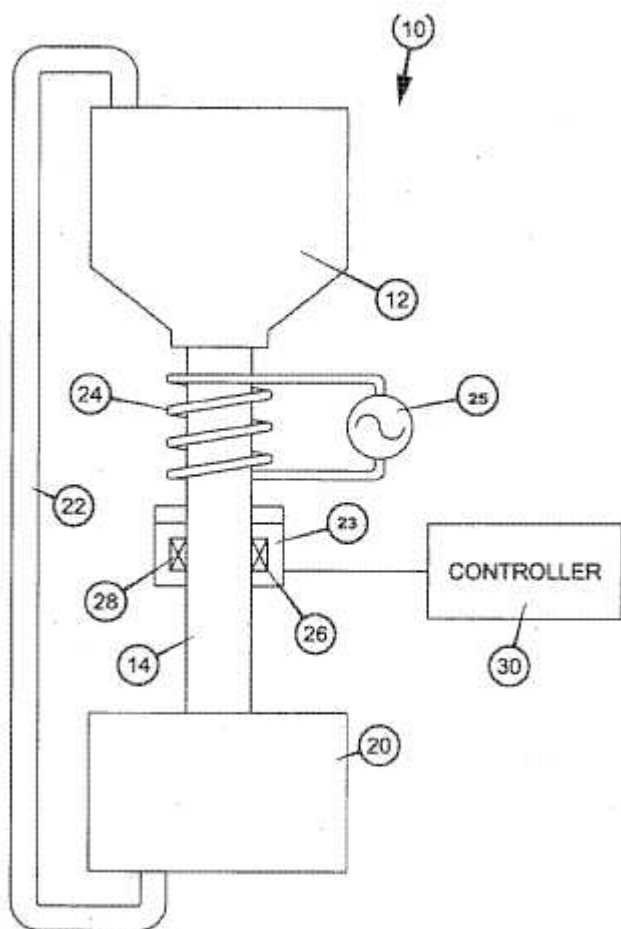
## B24C 5/08

**Devices for generating abrasive blasts non-mechanically, e.g. of metallic abrasives by means of a magnetic field [N: or by detonating cords]**

### Definition statement

*This subclass/group covers:*

Example(s): US20040259473 (magnetically), US5211135 (detonation cord clusters for deslagging water boilers).





## References relevant to classification in this group

*This subclass/group does not cover:*

## Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Attention is drawn to the following places, which may be of interest for search and classification:

Jet flame processing in general	<a href="#">B05B 7/205</a>
Abrasive blasting by jet flame processing	<a href="#">B24C 5/00</a>

## B24C 7/00

**Equipment for feeding abrasive material; Controlling the flowability, constitution, or other physical characteristics of abrasive blasts**

### Definition statement

*This subclass/group covers:*

Equipment for feeding and controlling the characteristics of abrasive blasting material

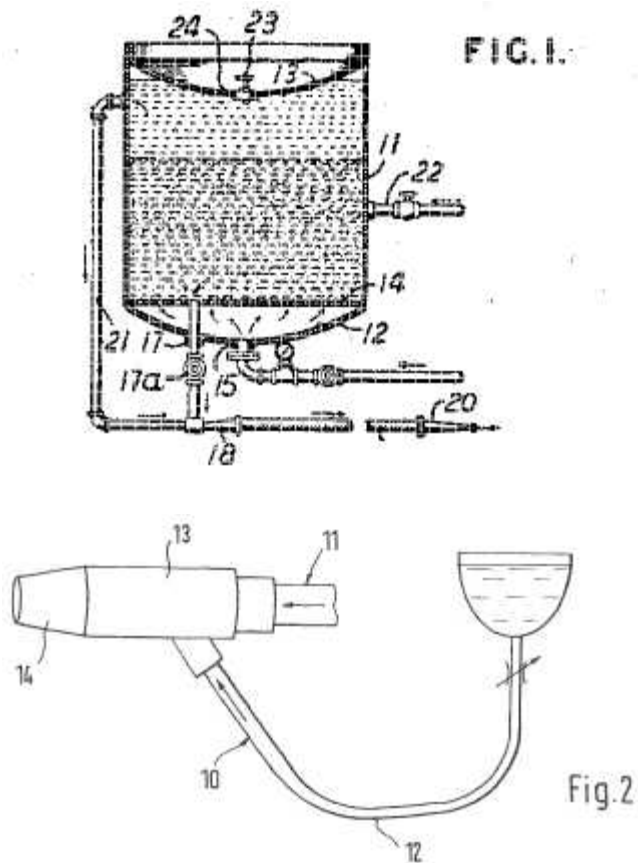
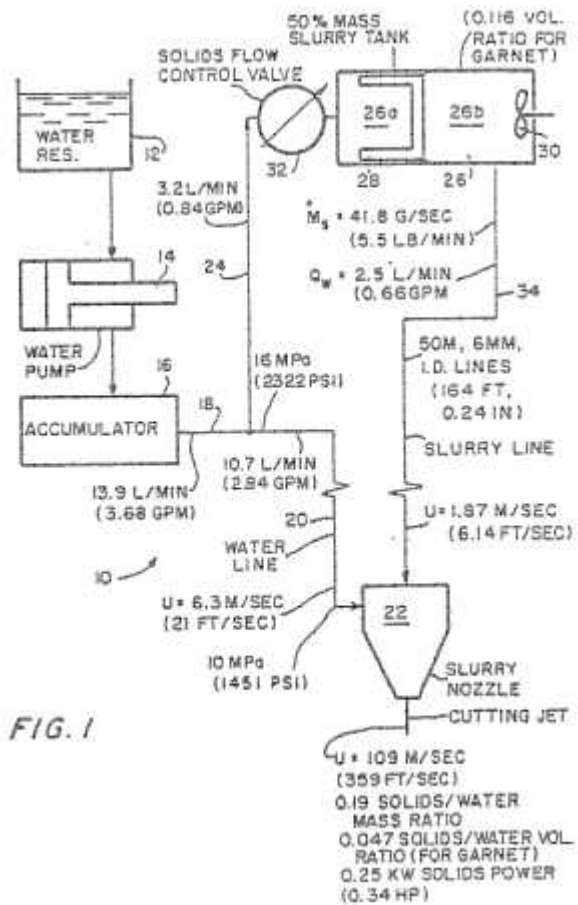
## B24C 7/0007

**[N: the abrasive material being fed in a liquid carrier]**

### Definition statement

*This subclass/group covers:*

Example(s): EP0322485, GB731117, EP1557223.



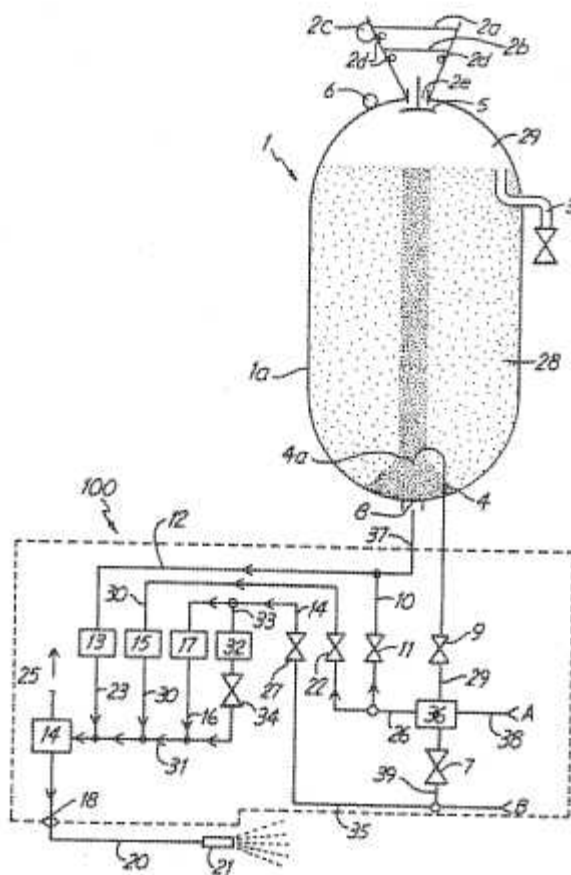
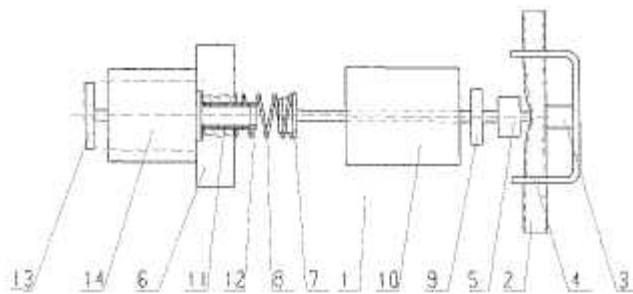
## B24C 7/0015

[N: with control of feed parameters, e.g. feed rate of abrasive material or carrier]

### Definition statement

*This subclass/group covers:*

Example(s): DE19933339, US5283991.



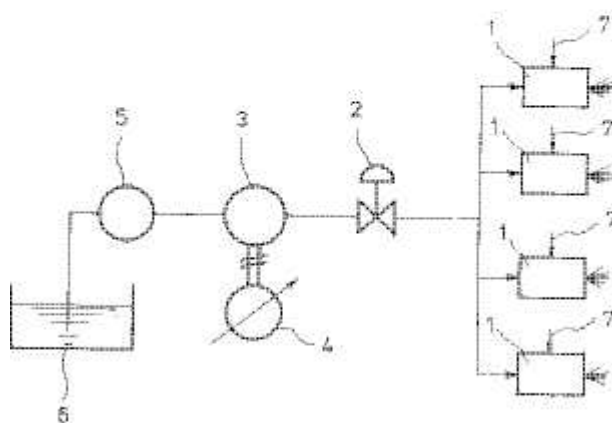
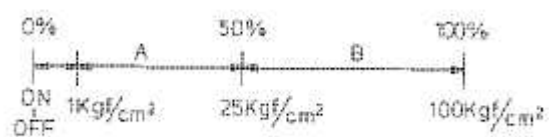
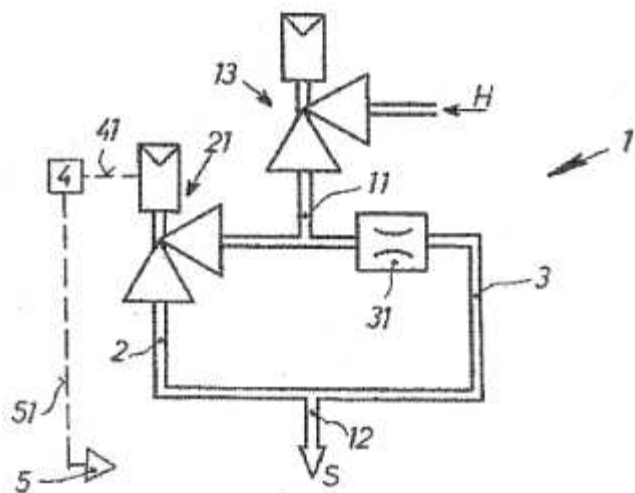
## B24C 7/0023

[N: of feed pressure]

## Definition statement

*This subclass/group covers:*

Example(s): US20070207702, JP59001167.



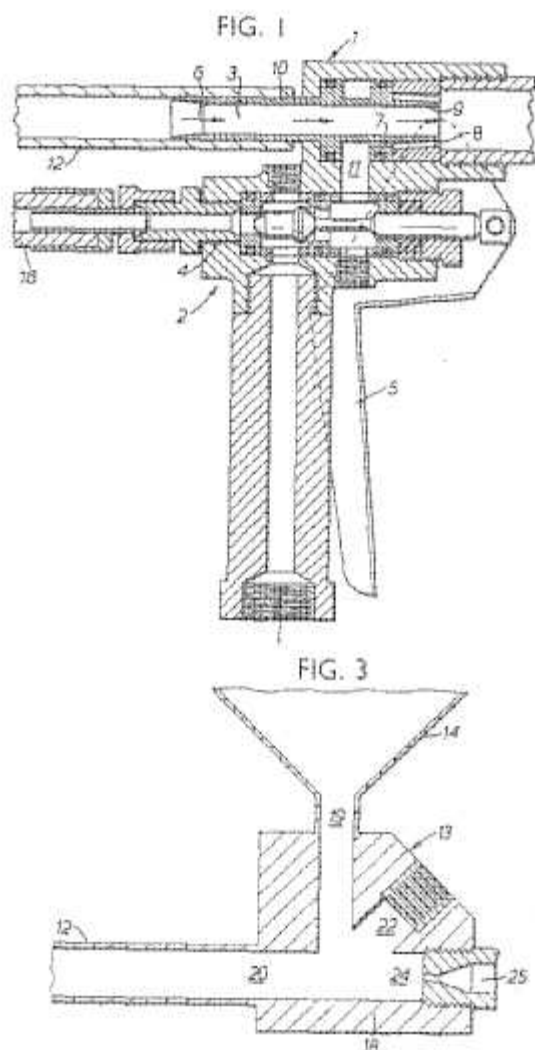
## B24C 7/003

[N: with means for preventing clogging of the equipment]

## Definition statement

*This subclass/group covers:*

Example(s): GB1424896.



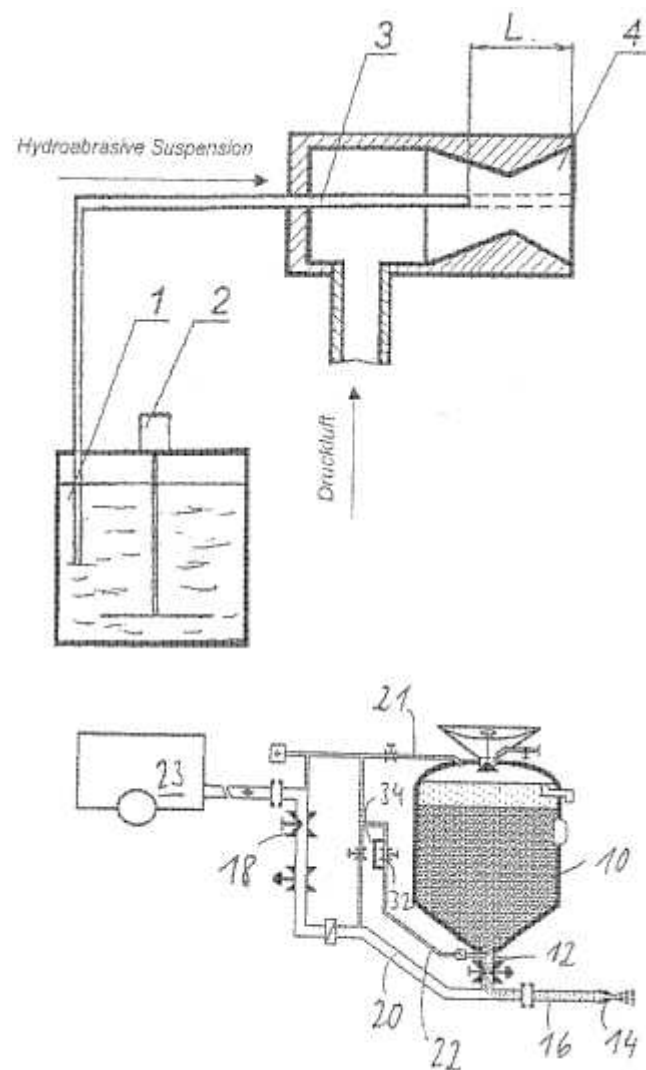
## **B24C 7/0038**

**[N: the blasting medium being a gaseous stream]**

### **Definition statement**

*This subclass/group covers:*

Example(s): DE10260257, DE4335382.



## B24C 7/0046

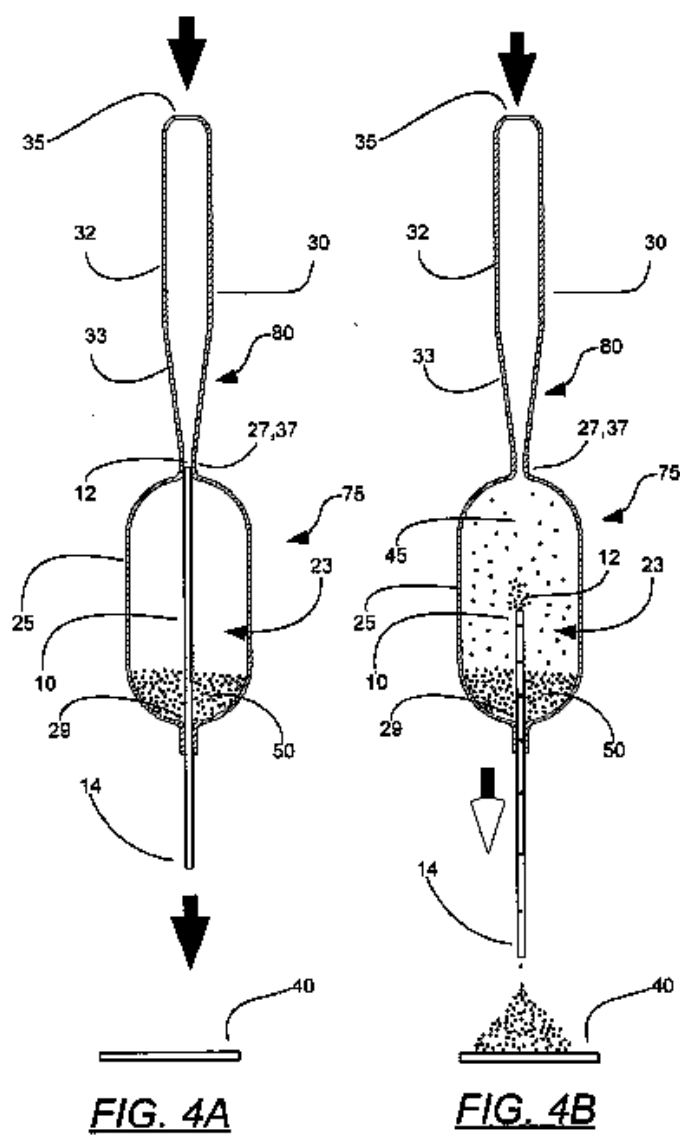
[N: the abrasive material being fed in a gaseous carrier]

### Definition statement

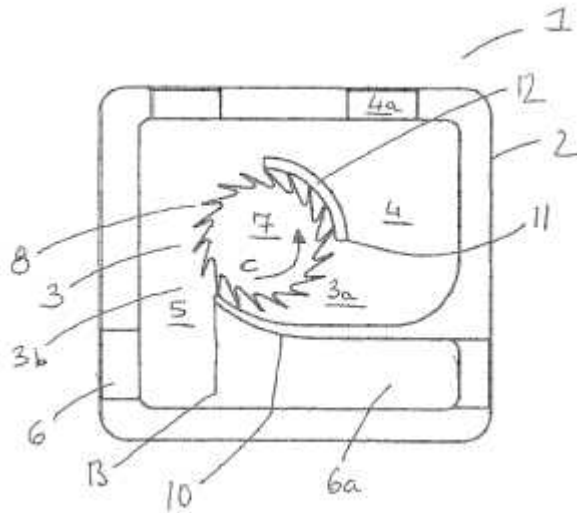
*This subclass/group covers:*

Example(s): DE1020070039540.









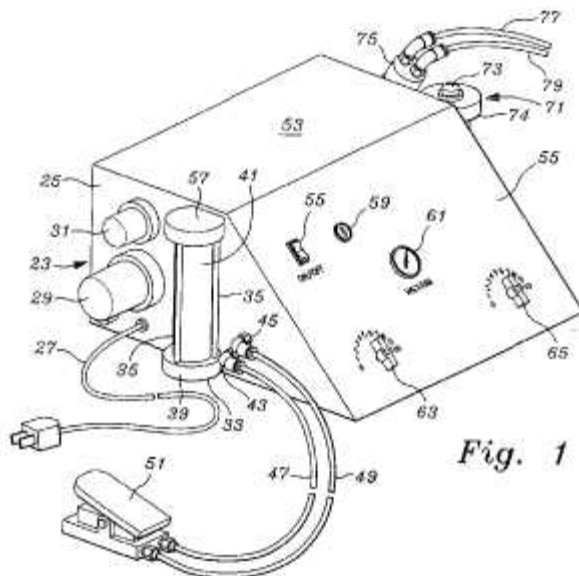
## B24C 7/0061

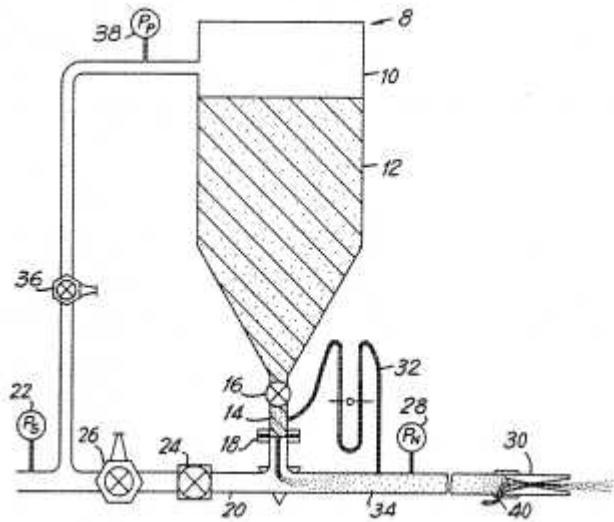
[N: of feed pressure]

### Definition statement

*This subclass/group covers:*

Example(s): EP0992221, US5081799.





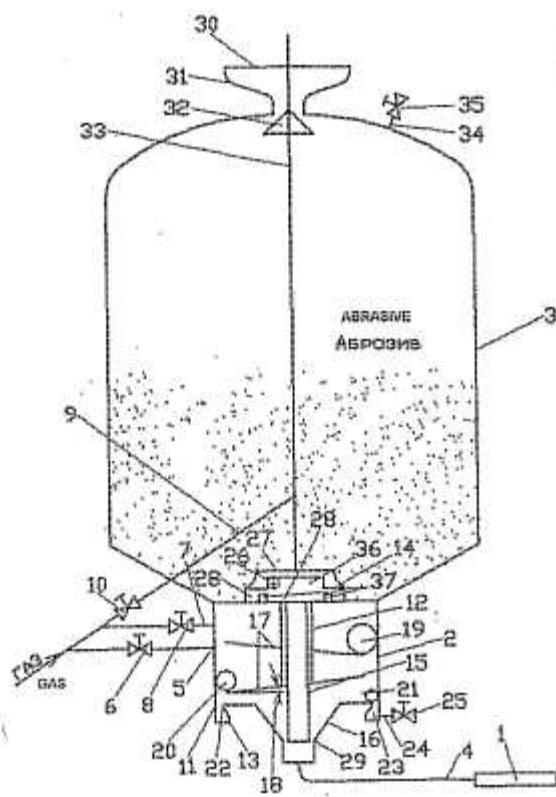
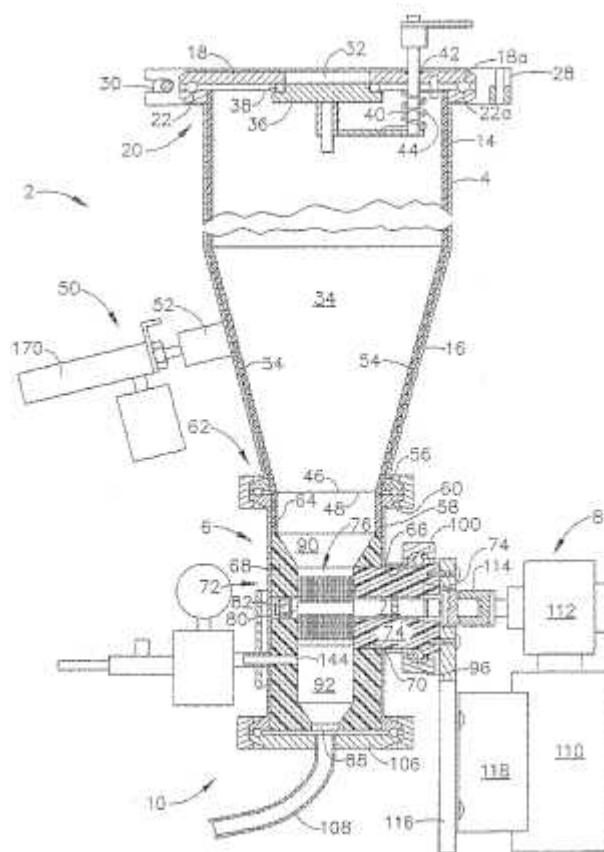
## B24C 7/0069

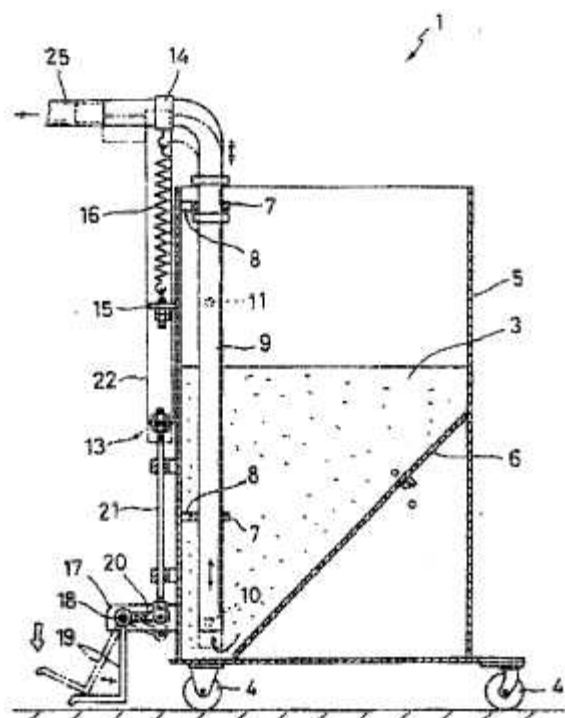
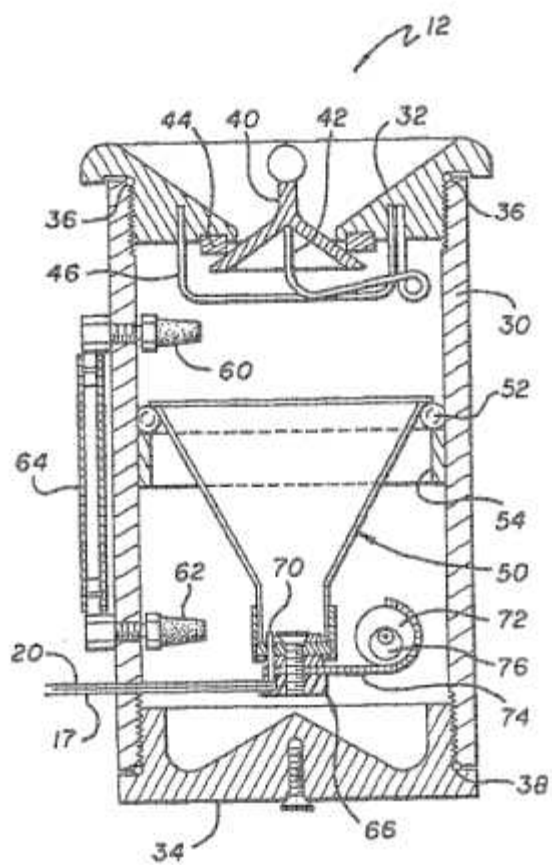
[N: with means for preventing clogging of the equipment or for preventing abrasive entering the airway]

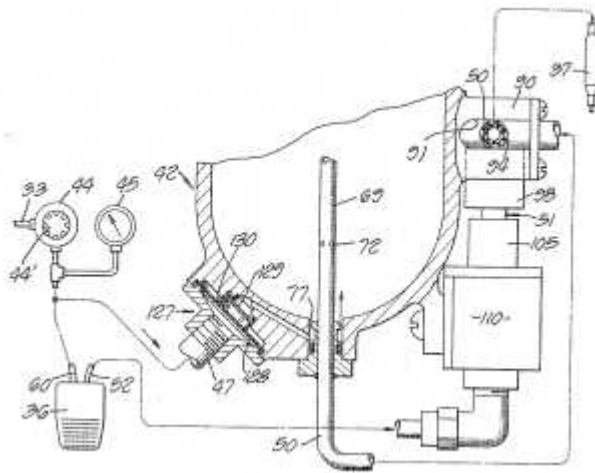
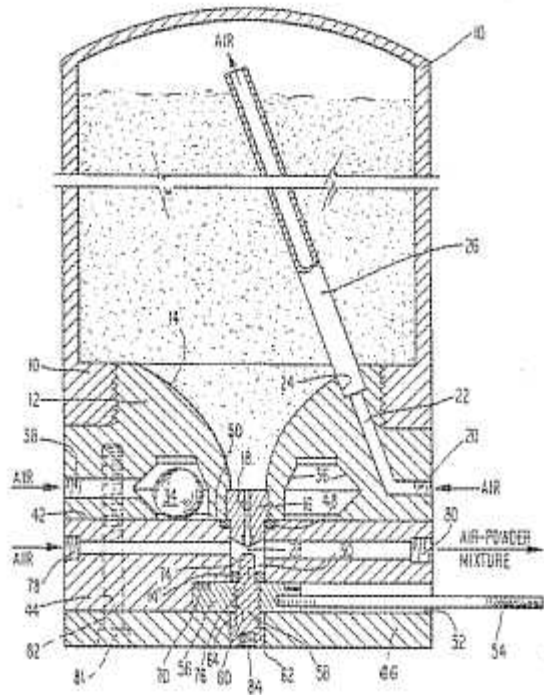
### Definition statement

*This subclass/group covers:*

Example(s): EP1851003, WO20040101224, WO9635389, EP0652078, US4569161, US3858360.







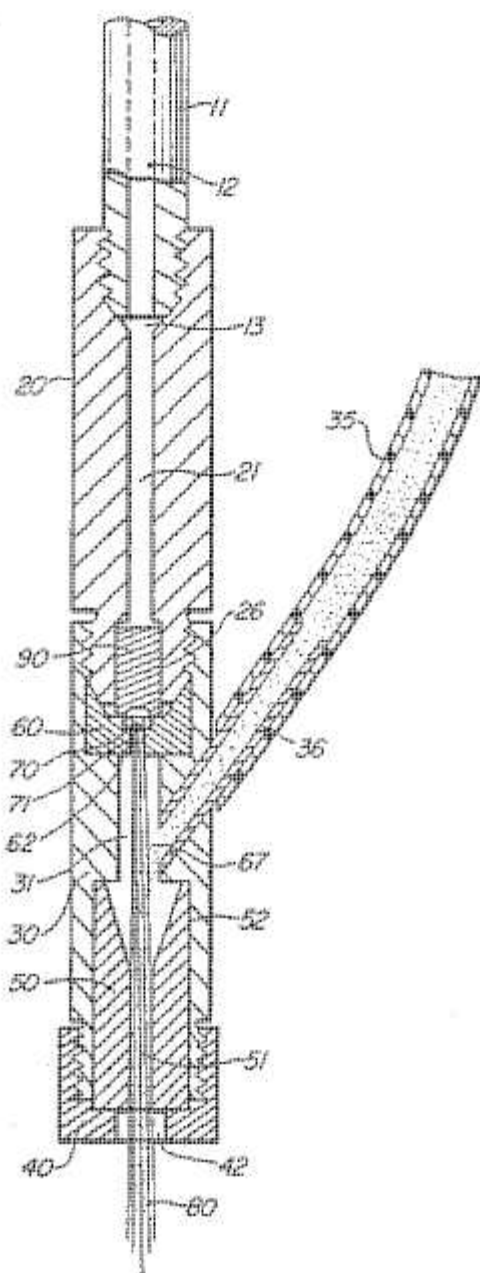
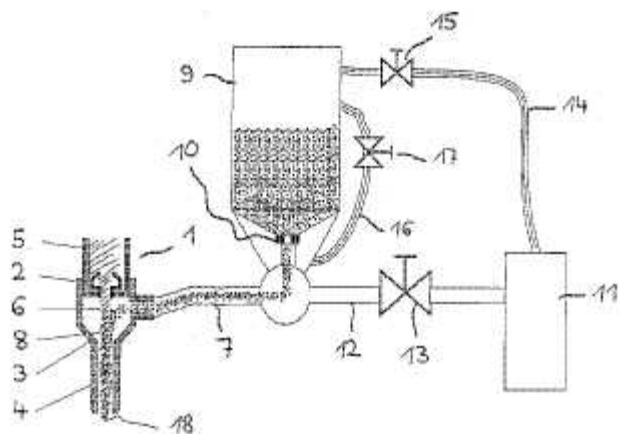
## B24C 7/0076

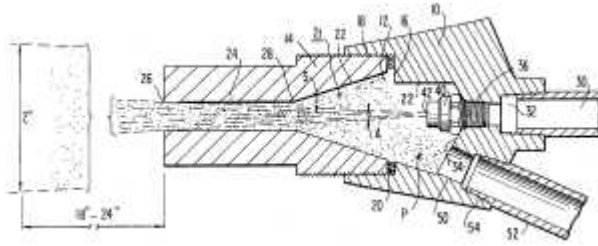
[N: the blasting medium being a liquid stream]

### Definition statement

*This subclass/group covers:*

Example(s): DE10348805, US4666083, US4218855.





## B24C 7/0084

**[N: the abrasive material being fed in a mixture of liquid and gas (B24C7/0038, B24C7/0076 take precedence; blasting medium with additives B24C11/005 )]**

### Definition statement

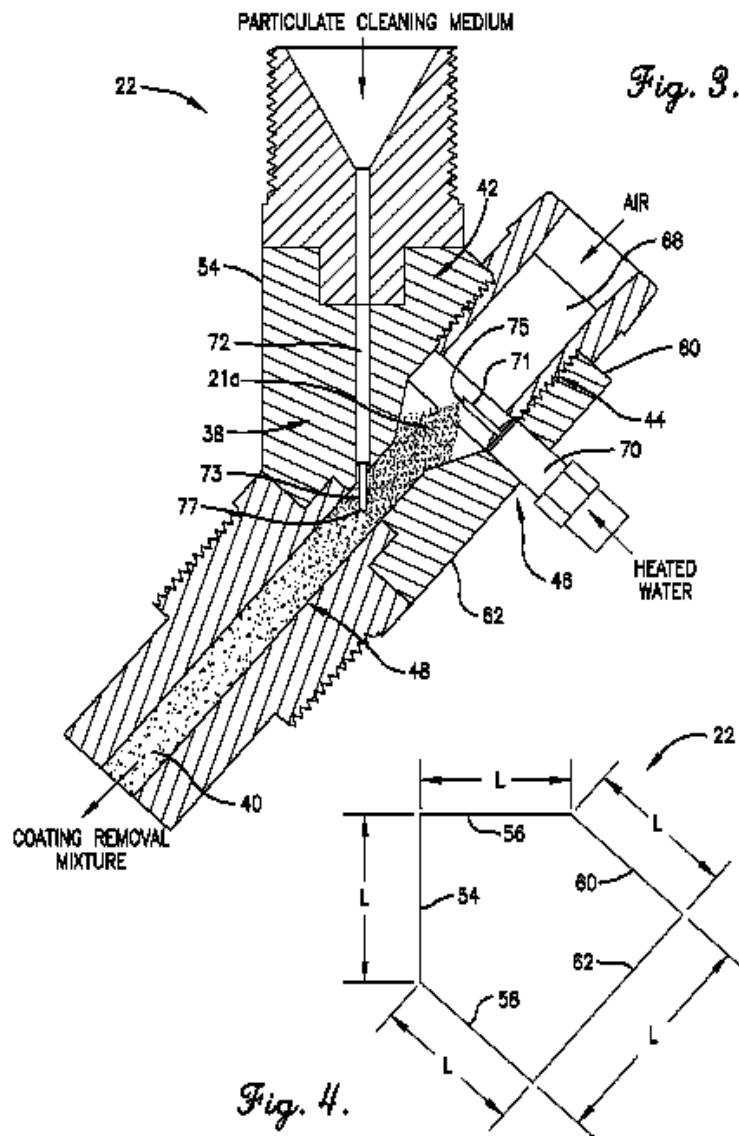
*This subclass/group covers:*

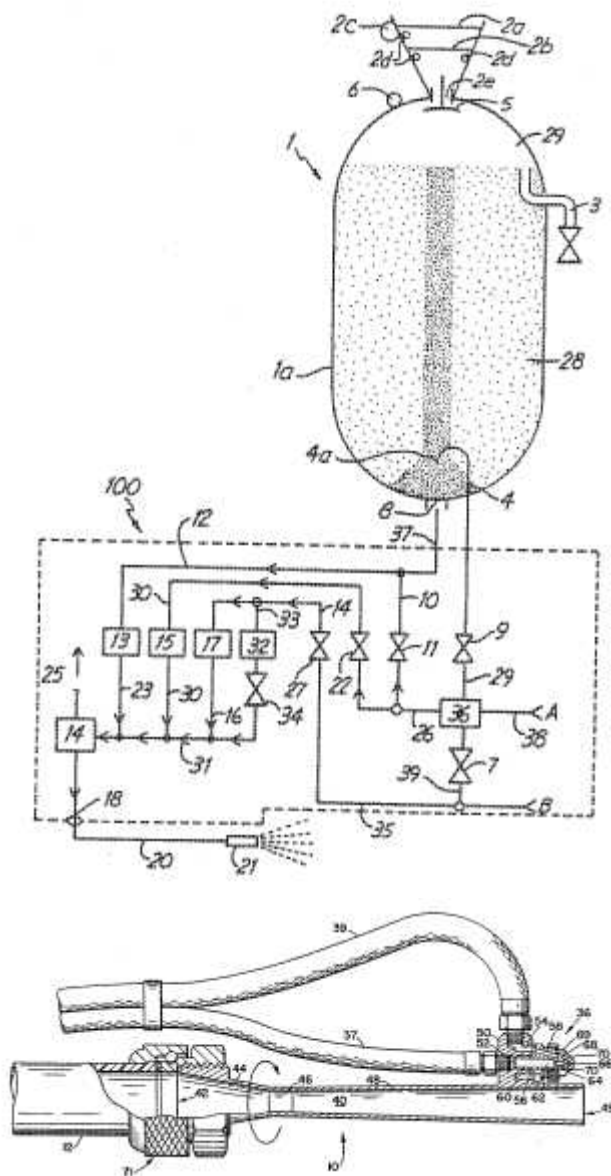
E.g. blasting where the abrasive is first mixed with liquid and a gas and then the mixture is fed and propelled to the working surface, or where the abrasive is added to a premixed flow of liquid and gas, or where a shrouding water curtain or water jet is added to the mixture jet of gas and abrasive.

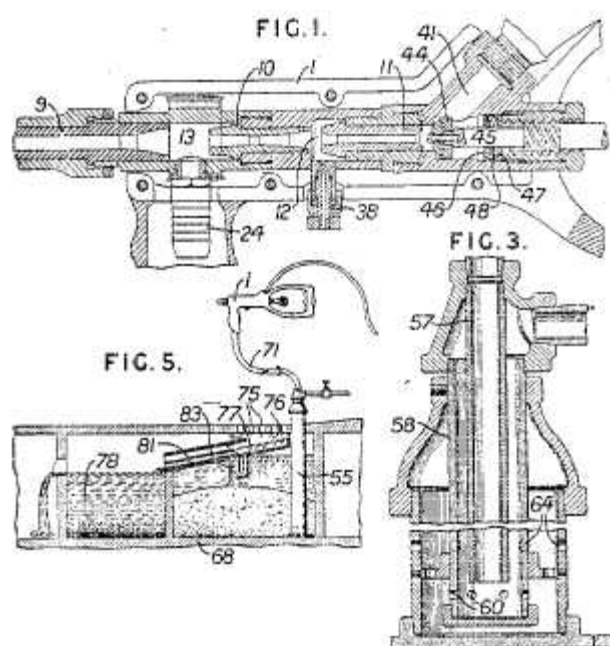
Example(s): US20110053464, US20110053464, US5283991, WO9408753, GB498478, DE1020040023246.

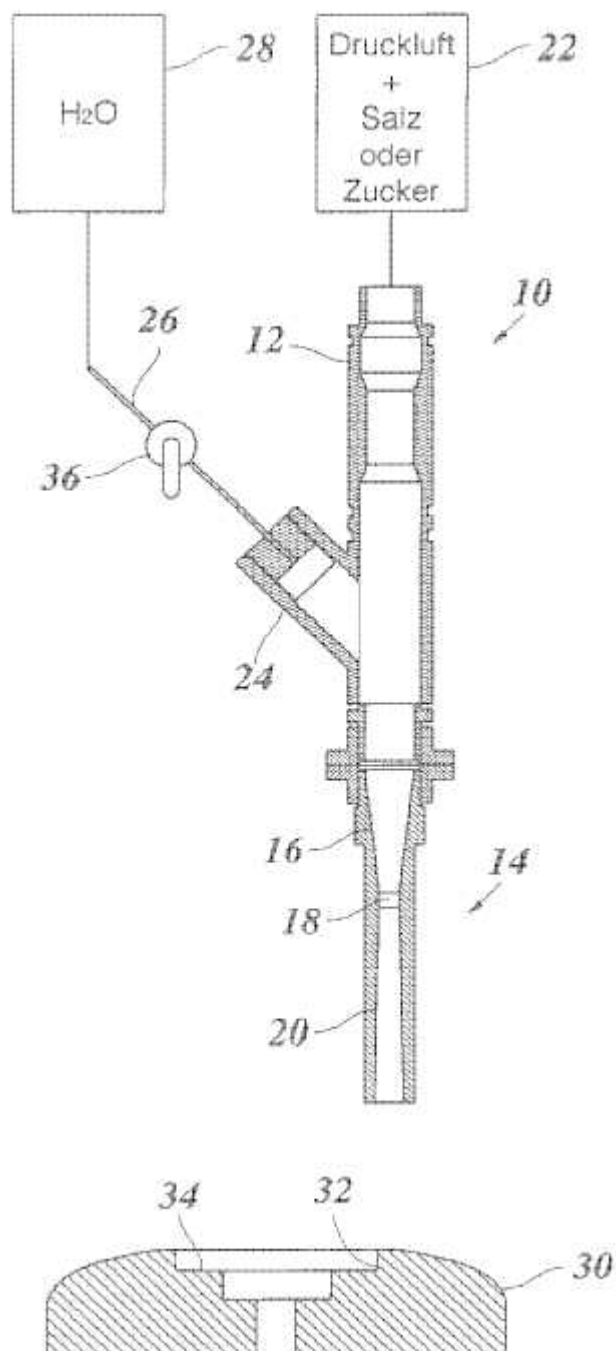












## References relevant to classification in this group

*This subclass/group does not cover:*

Blasting with abrasive, liquid and gas, where either the gas or the liquid is used as a blasting medium to propel the mixture of the other two constituents	<a href="#">B24C 7/0038</a> , <a href="#">B24C 7/0076</a>
Blasting with abrasive, liquid and gas, where one of the constituents is used	<a href="#">B24C 11/005</a>

as an additive	
----------------	--

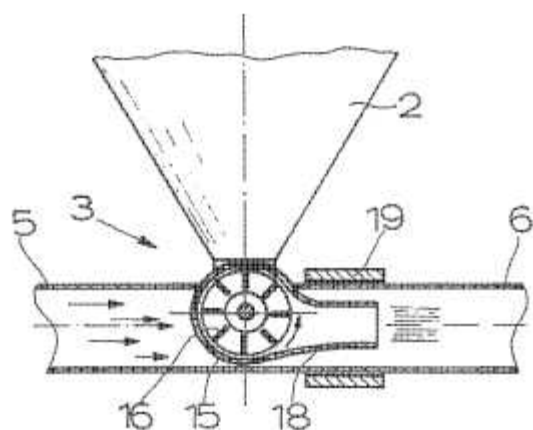
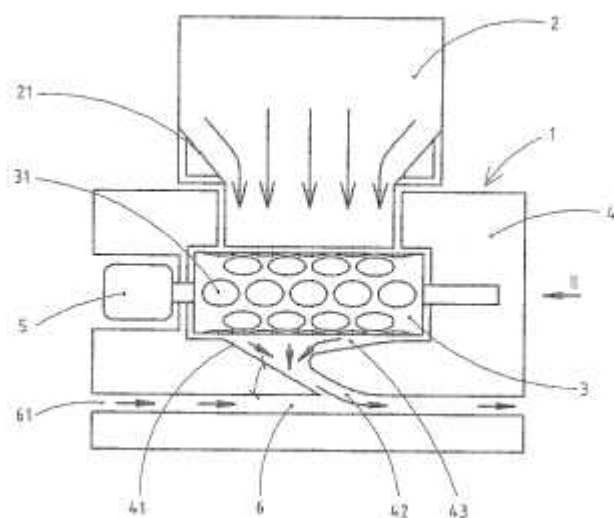
## B24C 7/0092

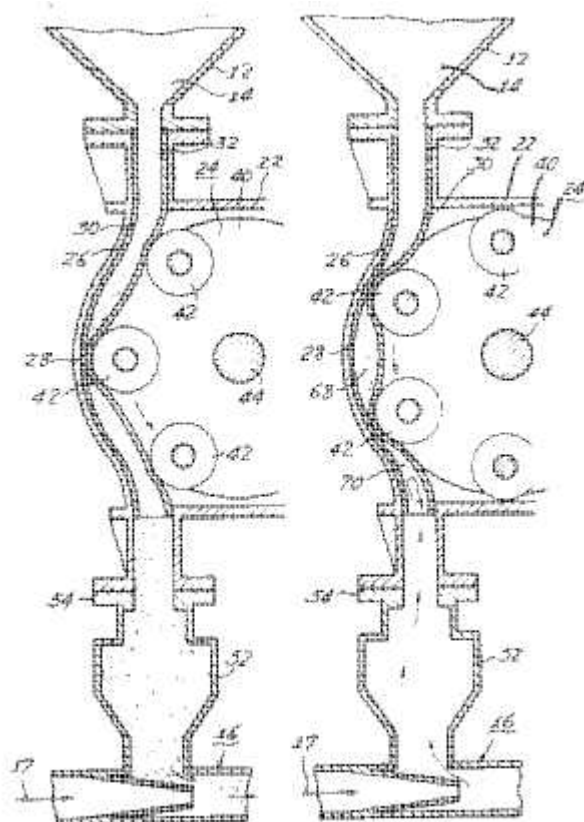
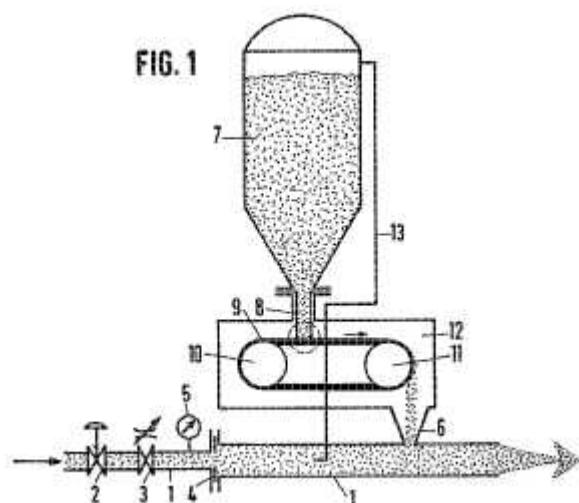
[N: the abrasive material being fed by mechanical means, e.g. by screw conveyors]

### Definition statement

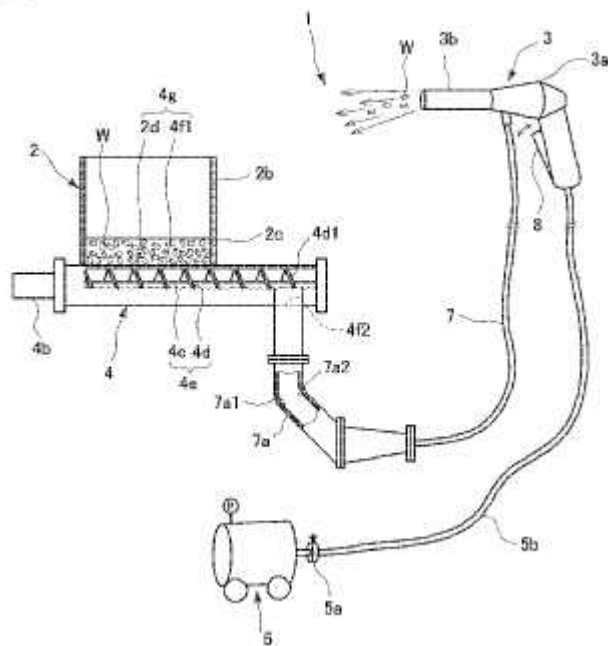
*This subclass/group covers:*

Example(s): DE10317663, DE3445643, GB2108399, JP58202777, WO20090096122.





[181]



## B24C 9/00

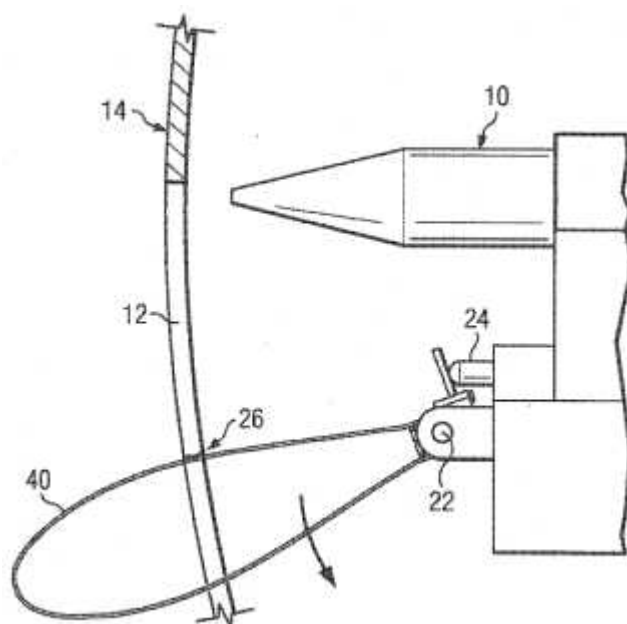
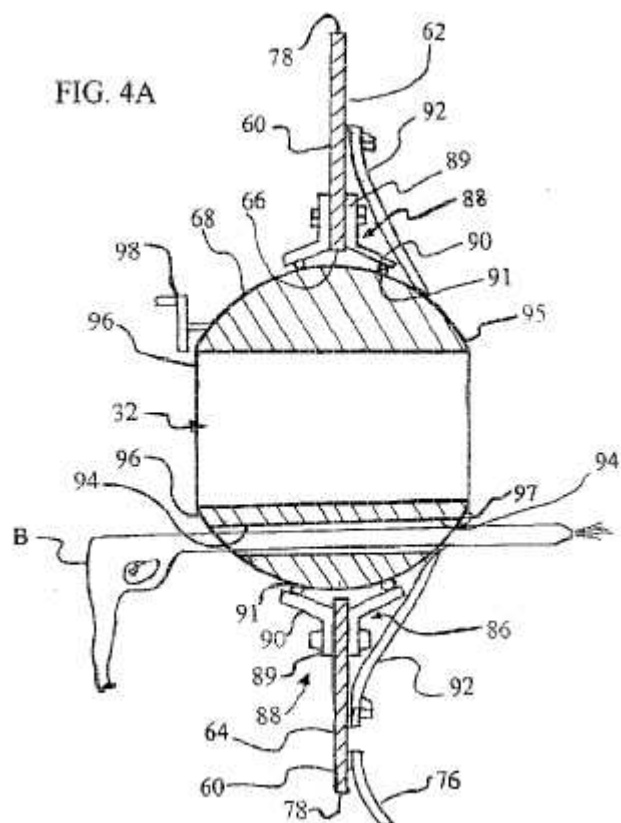
**Appurtenances of abrasive blasting machines or devices, e.g. working chambers, arrangements for handling used abrasive material**

### Definition statement

*This subclass/group covers:*

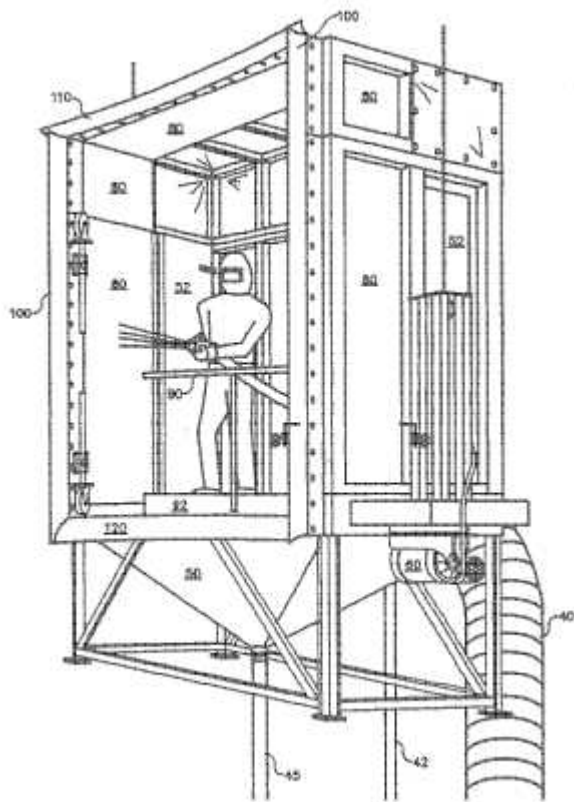
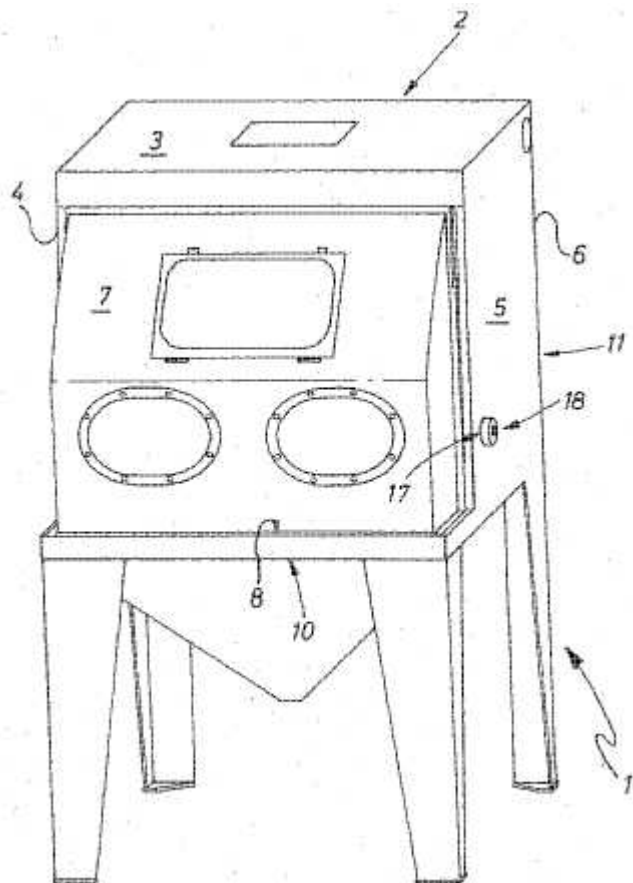
Example(s): EP2335852, US20110053458, DE1020080011663, US20060260823, DE10216468, US5367841, US4882881, US4139970.

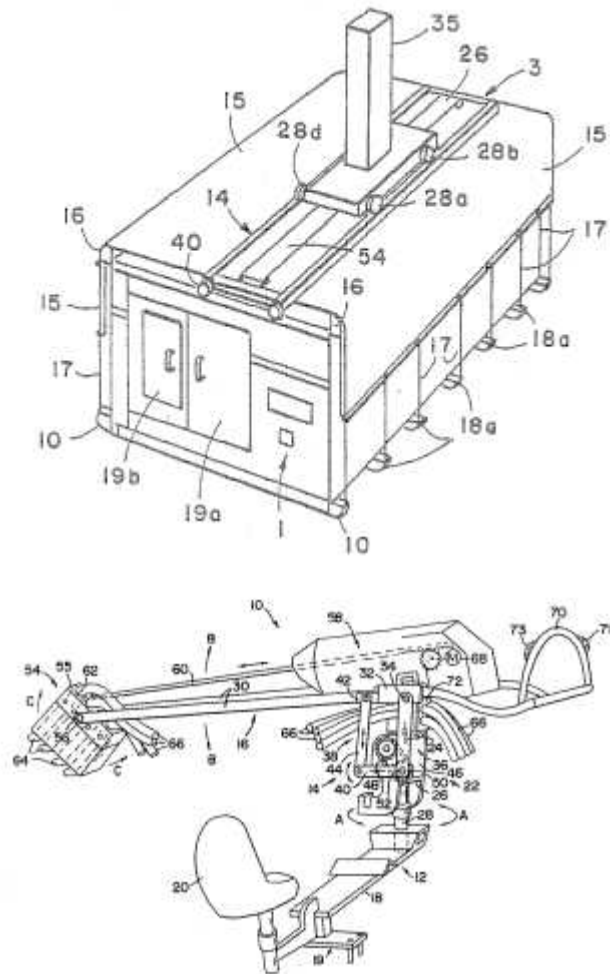
FIG. 4A











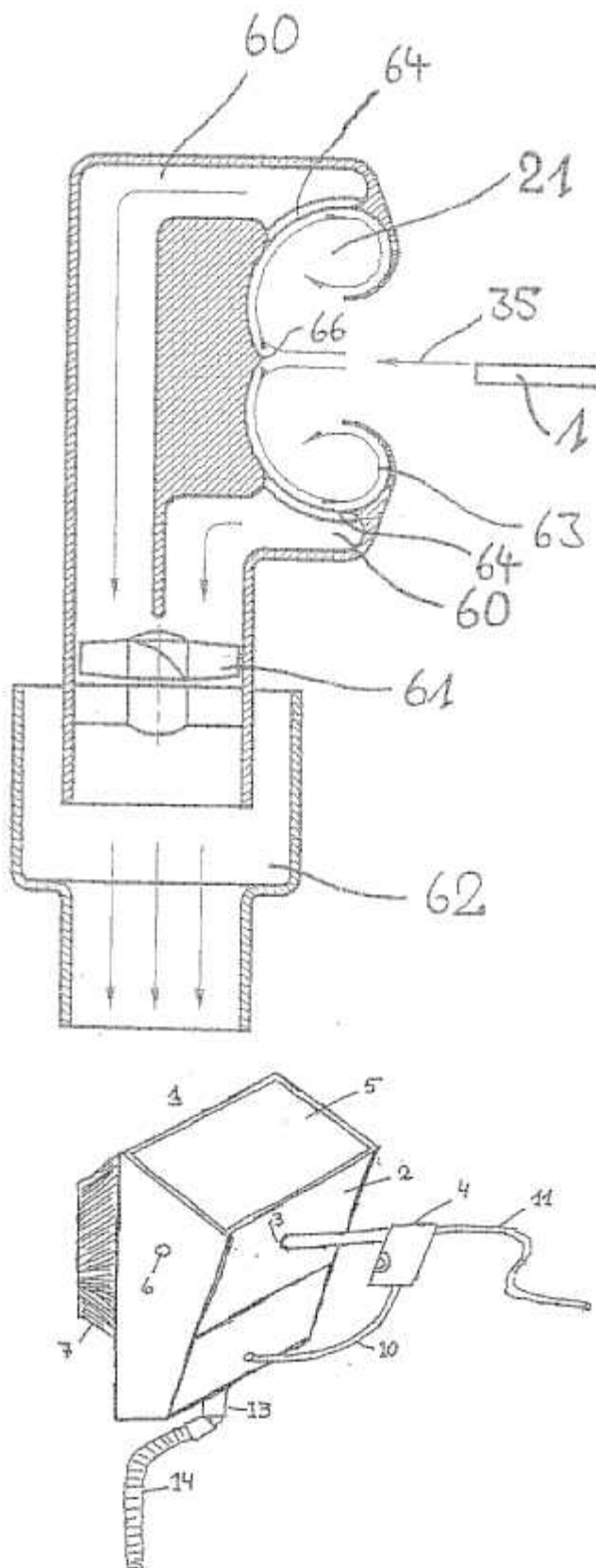
## B24C 9/003

[N: Removing abrasive powder out of the blasting machine]

### Definition statement

*This subclass/group covers:*

Example(s): DE19926084, DE4407956.



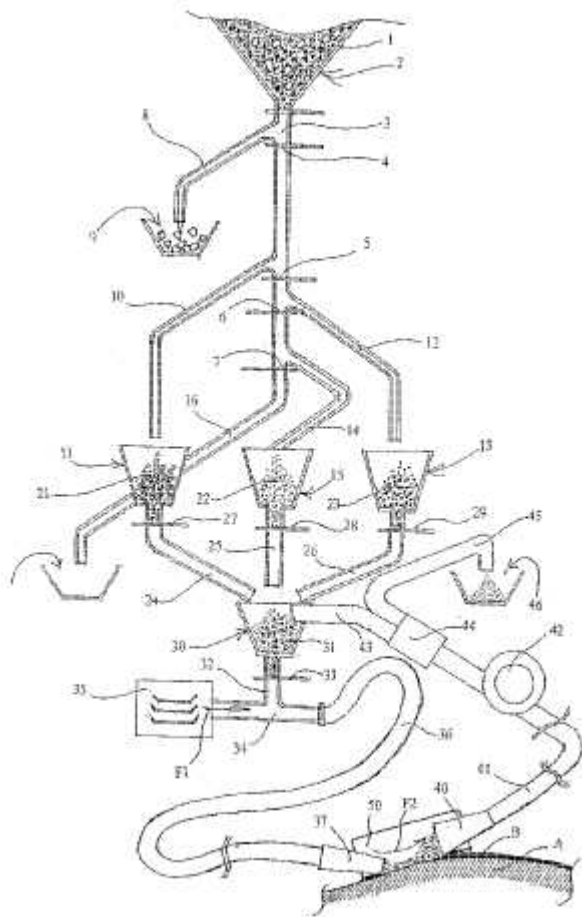
**B24C 9/006**

[N: Treatment of used abrasive material]

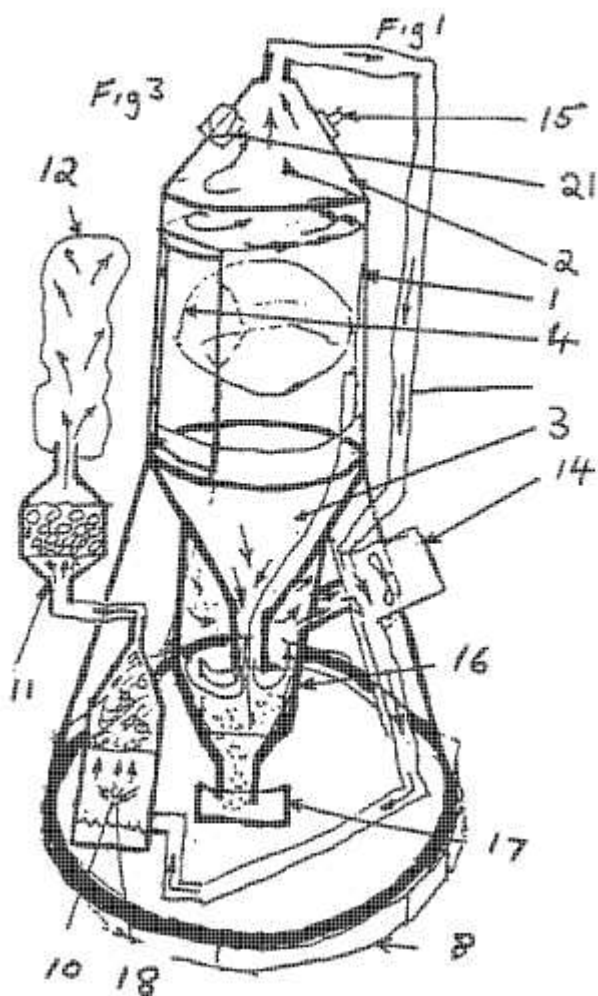
## Definition statement

*This subclass/group covers:*

Example(s): EP1603709 GB2367777, US4275531, GB2337953.







## B24C 11/00

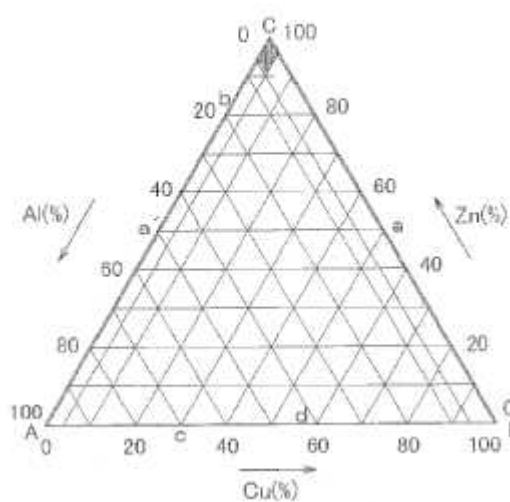
**Selection of abrasive materials [N: or additives] for abrasive blasts (polishing compositions C09G)**

### Definition statement

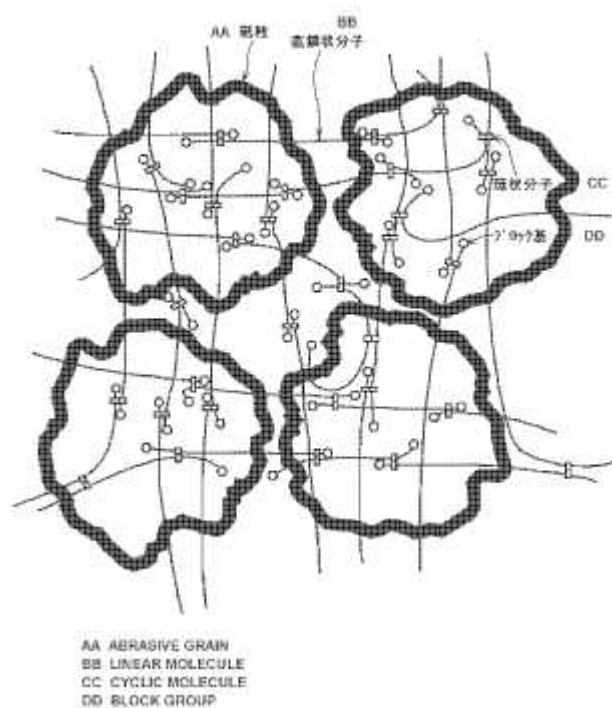
*This subclass/group covers:*

Example(s): WO20110052287, WO20090110231, US20060111023, JP57194878, US5344472, EP0798081.

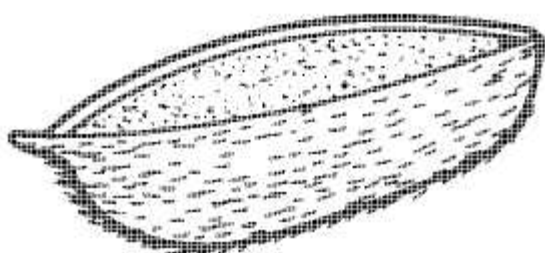
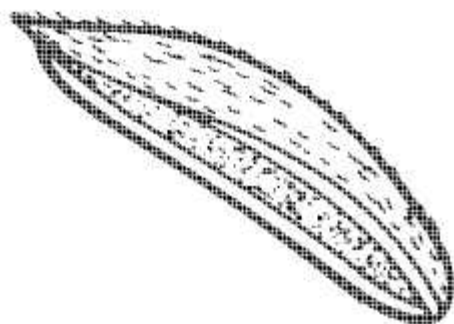
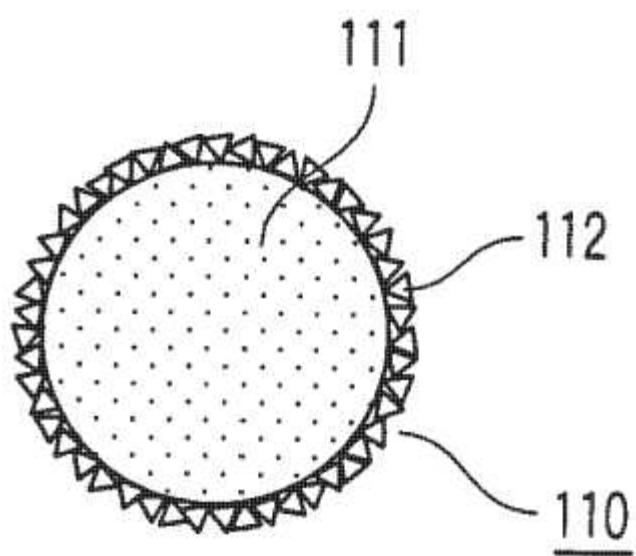
[圖1]



[圖1]







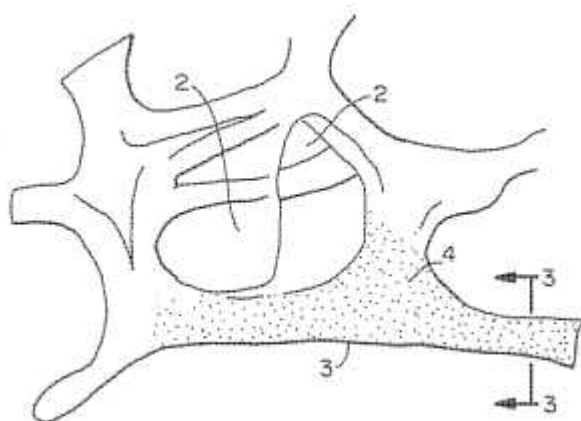


Fig. 1

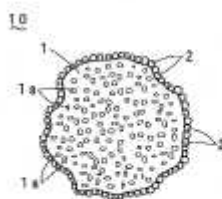
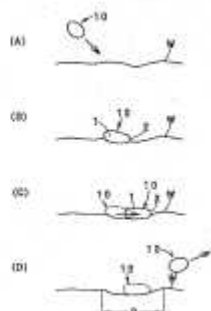


Fig. 2



## References relevant to classification in this group

*This subclass/group does not cover:*

Selection of abrasive material which changes phase after treatment

[B24C 1/003](#)

## B24C 11/005

[N: of additives, e.g. anti-corrosive or disinfecting agents in solid, liquid or gaseous form]

## Definition statement

*This subclass/group covers:*

Example(s): GB2403726, EP1422026.

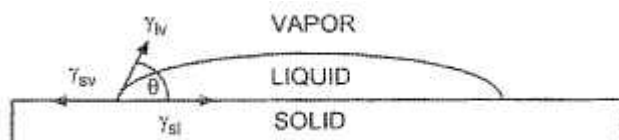


FIG. 1

